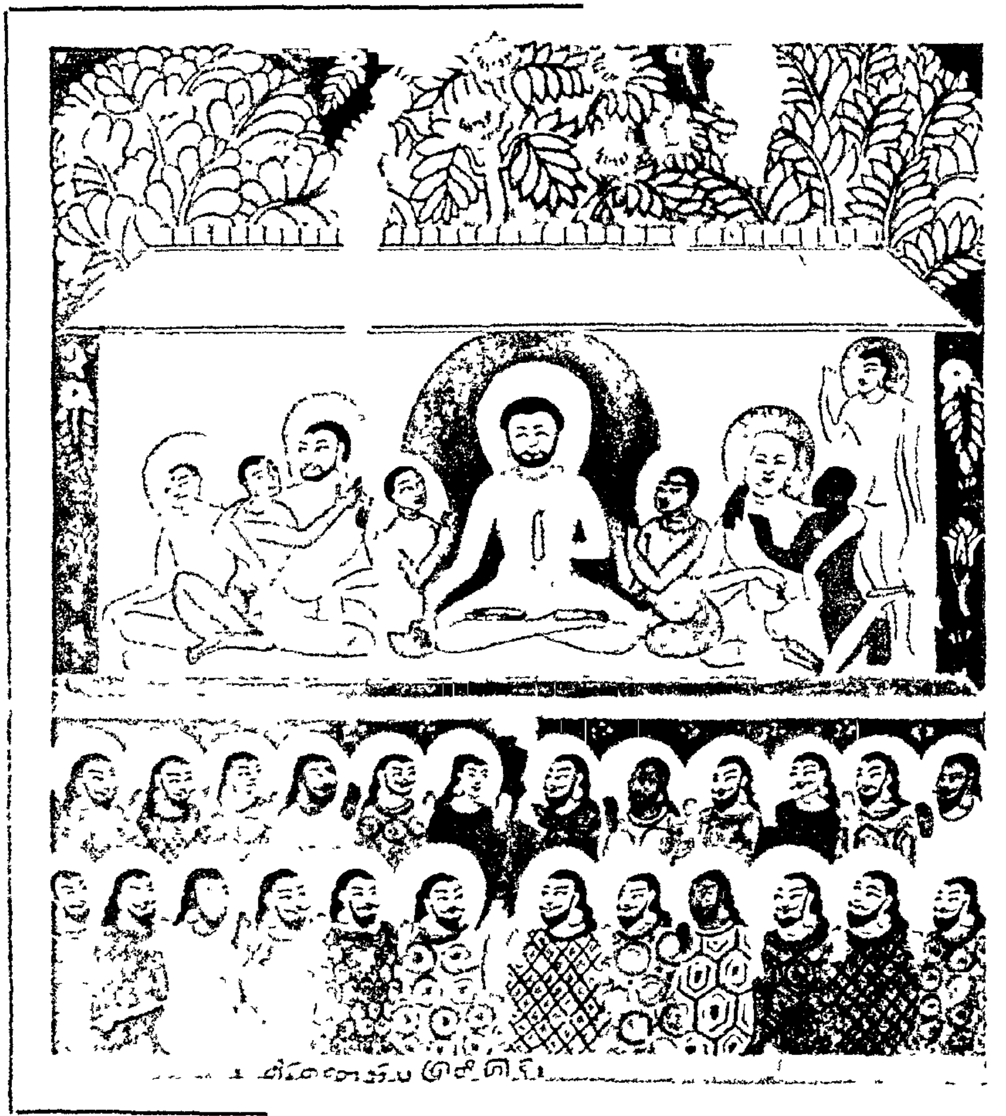


F[illegible] Wall-painting in the Kubyaukkyi Temple, Myinpagan, near Pagan, Burma, 11th-12th Century A. D.

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" CVIII.—EXPLORATION: BURMA.

(*a*) A Plaster Image of a Bodhisattva, found in a Ruined Small Shrine near the Nagayon, Myinpagan.

(*b*) View of Some of the Ancient Monuments S.E. of the Nagayon, Myinpagan, excavated during 1931-32.

(*c*) A Miniature Stūpa in Stone found in the Relic Chamber of the Middle Shrine in fig. *b* above.

(*d*) Terra-cotta Votive Tablet found in the Relic Chamber of the Central Stūpa shown in fig. *b*; with an Inscription in Pāli of the "Chief Queen Trilokavataṁsakā".

PLATE CIX.—EXPLORATION: BURMA.

(*a*) Outline Copy of a Wall-painting in the Patothamya Temple, Pagan: The *rishi* foretells the Future Greatness of Prince Siddhārtha, shown to him by the King and the Queen; an 11th Century Painting with an Old Môn Legend below the Panel.

(*b*) The *yamaka pāṭihāriya* of the Buddha: Another Wall-painting in the Patothamya Temple, showing the Enlightened One among Monks and Ascetes; with an Inscription in Old Môn.

" CX. EXPLORATION: BURMA.

(*a*) Wooden Image of the 14th Century A.D., representing a Crowned Buddha; found in a Cave Temple, Kyaukse.

(*b*) Another Wooden Image from the Cave Temple at Kyaukse: A Buddha with a conical Protuberance supported by Elephants.

(*c*) An Image of the Buddha in Royal Attire; found in a Ruined Shrine in the Pyezu Quarter, Pagan.

(*d*) Another Image from the Ruined Shrine in Pagan: The Buddha in the Pārileyyaka Forest with his sole Companion, the Elephant; with a Burmese Inscription of the 16th-17th Century A.D.

" CXI.—EXPLORATION: BURMA.

(*a*) Seated Bronze Image of the Buddha discovered in the Pyezu Quarter, Pagan; with an extra Thumb in the Left Hand.

(*b*) The Buddha Preaching: Another Bronze Image found together with figs. *a*. *c* and *d*.

(*c*) Stone Image of an *arhat*, from the same Place as fig. *a*.

(*d*) Bronze Image of a Buddhist *arhat* from Pagan; with a Burmese Legend dated 1602 A.D.

(*e*) Copy of a Wall-painting in the Patothamya Temple, Pagan; A 14th Century Work with an Inscription. (See also Plate CIX.)

" CXII.—EXPLORATION: BURMA.

(*a*) A Sculptured Stone Slab found in the Shwezayan Pagoda, Thaton; with Faint Remnants of an 11th-12th Century Inscription.

(*b*) Another Inscribed Stone Slab found in the Shwezayan Pagoda; with an 11th-12th Century Inscription.

(*c*) View of the Thagya-paya at Thaton; showing the Situation of the Terra-cotta Bas-reliefs illustrated in Plates CXIII, CXIV and CXV.

(*d*) A Bronze Image of the Dīpaṅkara Buddha, now at Thaton; probably a Work of the 7th-8th Century A.D.

" CXIII.—EXPLORATION: BURMA.

(*a*) Sketch Plan of the Second Terrace Walls of the Thagya-paya, Thaton; showing the Situation of the Terra-cotta Relievoes; those still *in situ* being marked by a Circle.

(*b*) A Terra-cotta Plaque of the Thagya-paya: The *Vessantara Jātaka*.

(*c*) Another Terra-cotta Plaque from the Thagya-paya: The *Vidhura Jātaka*.

PLATE CXIV.—EXPLORATION: BURMA.

(*a*) A Scene from the *Vidhura Jātaka* illustrated in a Relievo Panel on the Thagya-paya, Thaton. (Cp. fig. *b*.) (The Outlines have been slightly emphasized with Black Ink.)

(*b*) For Comparison with fig. *a*: The *Vidhura Jātaka* illustrated in a Terra-cotta Plaque in the Petleik Temple, Pagan.

(*c*) Another Terra-cotta Tablet on the Terrace Walls of the Thagya-paya, Thaton: A Scene from the *Mahā-Ummagga Jātaka*.

(*d*) The *Bhūridatta Jātaka* as illustrated in a Relief on the Thagya-paya, Thaton; a very much damaged Terra-cotta Plaque.

„ CXV.—EXPLORATION: BURMA.

(*a*) A Terra-cotta Plaque in the Terrace Wall of the Thagya-paya, Thaton; probably a scene from the *Bhūridatta Jātaka*.

(*b*) Another Buddhist Birth Story illustrated on the Thagya-paya: A Scene from the *Mahā-Ummagga Jātaka*: The Story of the Four Nobles and Amarā, the faithful Wife of Mahosadha.

(*c*) King Mahosadha in Exile in the Potter's House; and his triumphal Return in a Chariot: Two Scenes from the *Mahā-Ummagga Jātaka*, in a Relief at Thaton.

(*d*) A Plaque from the Thagya-paya, probably illustrating a Scene from the *Temiya Jātaka*: Prince Temiya talking to the Charioteer(?).

„ CXVI.—EXPLORATION: BURMA.

(*a*), (*b*), (*c*) and (*d*) Stone Pillars found in the Kalyāṇī Sīmā, Thaton, illustrating Scenes from the *Mahānipāta Jātakas*: (*a*) the *Sāma Jātaka*, (*b*) the *Nemi Jātaka*, (*c*) the *Vidhura Jātaka*, and (*d*) the *Vessantara Jātaka*.

(*e*) The *Mahā-Ummagga Jātaka*, (*f*) the *Vidhura Jātaka*, and (*g*) the *Vessantara Jātaka*: Illustrations to the *Mahānipāta Jātakas* in Relievoes on Stone Pillars in the Kalyāṇī Sīmā at Thaton; probably of the 12th-13th Century A.D.

„ CXVII.—EXPLORATION: BURMA.

(*a*) The Yegyi Yenauk Pagoda, Bassein, after its illegitimate Excavation by Buddhist Monks in the Year 1933-34.

(*b*) A Stone Stūpa of Miniature Size found in one of the Relic Chambers of the Yegyi Yenauk shown in fig. *a*.

(*c*) Terra-cotta Votive Tablets of the 12th-14th Century discovered in the Two Relic Chambers of the Stūpa illustrated in fig. *a*.

(*d*) Another Votive Stūpa in Stone found in the Relic Chamber of the Yegyi Yenauk Stūpa.

„ CXVIII.—EXPLORATION: BURMA.

(*a*) A High Official and his Wife: Stone Images of two Devotees found in one of the Relic Chambers of the Yegyi Yenauk Stūpa shown in Plate CXVII, *a*.

(*b*) Further Finds in the Yegyi Yenauk Pagoda: Two Bronze Images of the Buddha with high Crowns, seated in the *bhūmisparśa*-attitude (ht. 6″).

PLATE CXXV.—INDIAN MUSEUM, CALCUTTA.
(*a*) The Buddha calling the Earth to Witness: one of the four Images from Virat Cuttack, Cuttack, illustrated in this Plate.
(*b*) Tārā, the Saviouress: A *c.* 10th Century Image from Virat Cuttack; slightly later than the Images in figs. *a* and *c*.
(*c*) Another Buddha from Virat Cuttack, not later than the 8th-9th Century.
(*d*) Probably Part of a larger Composition: A *dvārapāla* of about the 9th Century A.D.

" CXXVI.—INDIAN MUSEUM, CALCUTTA.
(*a*)-(*e*) Punch-marked Coins from Manda, Rajshahi District, acquired during 1932-33; and (*f*) A Cast Coin from the Midnapur District.
(*g*) Semi-precious Stone Beads acquired from Rajgir.
(*h*) Pottery Vessel with Inscription in unknown Script; and three Jar-covers; from Rajgir.

" CXXVII.—INDIAN MUSEUM, CALCUTTA.
(*a*) Inscribed Stone Image of Prajñāpāramitā from the Neighbourhood of Nālandā.
(*b*) Fragment of an Image with lower Portion of a Deity seated on a Camel; from Kakdighi, Bairhatta, Dinajpur District.
(*c*) Inscribed Image of Sūrya from Bairhatta, Dinajpur District; probably 12th Century A.D.
(*d*) Hari-Hara, attended by the Buddha and Sūrya: a Stone Image from Bihar; *c.* 12th-13th Century A.D.

" CXXVIII.—INDIAN MUSEUM, CALCUTTA.
1-19. Palæolithic and Neolithic Implements from South India.

" CXXIX.—INDIAN MUSEUM, CALCUTTA.
1-9. Black Pottery, and (9) an Iron Celt from Huttanhalli, near Bangalore.

" CXXX.—INDIAN MUSEUM, CALCUTTA.
Figs. 1-2: Ring-stones from Mathurā; figs. 3-7: Terra-cottas from Mathurā: fig. 8: The Embossed Gold-leaf from Lauriya Nandangarh (for Comparison with figs. 1 and 2); and figs. 9-10: Two Terra-cotta Votive Tablets from Siam.

" CXXXI.—INDIAN MUSEUM, CALCUTTA.
(*a*) The Birth of the Buddha: Stone Sculpture from Nālandā, Bihar; *c.* 10th Century A.D.
(*b*) The Bodhisattva Avalokiteśvara: Stone Sculpture from Chowrapara, Rajshahi District; *c.* 12th Century A.D.
(*c*) Stone Image of Vishṇu, from Ganpur, Rajshahi District; about the 12th Century A.D.
(*d*) Stone Image of Sūrya, from Ganpur, Rajshahi District; from the 12th-13th Century A.D.

" CXXXII.—INDIAN MUSEUM, CALCUTTA.
(*a*) Bronze Elephant from Mahasthan, Bogra District.
(*b*) Stone Relievo representing the 'Mother-and-Child' Subject; from Chowra Kasba, Rajshahi District.
(*c*) Stone Image of Garuḍa, probably from the Top of a Garuḍa-pillar; from Chowra Kasba, Rajshahi District; *c.* 12th Century A.D.
(*d*) Stone Image of Siva, from Chowra Kasba, Rajshahi District, probably a Work of the 13th Century A.D.

PLATE CXXXIII.—DELHI FORT MUSEUM.

(*a*) Front, and (*b*) Back of a Petition dated 1087 A.H. (=1677 A.D.) from Āqā 'Abdu-r-Rashīd Dailmī to the Emperor Shāh Jahān; with a Painting representing the Petitioner submitting his Request to the Emperor.

(*c*) A Specimen of Calligraphy in *shikasta*, alleged to have been written by Aurangzeb.

(*d*) A *farmān* of Maryam Zamānī, the Mother of the Emperor Jahāngīr, on Loan in the Delhi Fort Museum.

" CXXXIV.—NĀLANDĀ MUSEUM.

(*a*) The Bronze Find of 1932-33: The Buddha in the 'Attitude of Reassurance'; after Chemical Treatment.

(*b*) Another Bronze found in 1932-33: The Buddha in the *varada-mudrā*: a Masterpiece of Early Date (7th-8th Century A.D.).

(*c*) One of a Hoard of some 75 Images unearthed at Nālandā during 1932-33 and illustrated in this and the following Plates: A *varada*-Buddha of later Date.

(*d*) A Standing Bronze Image of the Buddha in the 'Gift-bestowing Attitude'; assignable to the same Date as fig. *b* above (7th-8th Century A.D.).

" CXXXV.—NĀLANDĀ MUSEUM.

(*a*) Trailokyavijaya trampling on Śiva and Pārvatī: Probably a symbolical Representation of Buddhism militant against Hinduism.

(*b*) A Masterpiece in a Hoard of mixed Quality Images, illustrated in Plates CXXXIV to CXXXVIII: Vajrapāṇi, or Mañjuśrī.

(*c*) A four-faced Vajrapāṇi Image of Late Date; Front View.

(*d*) Back View of the Vajrapāṇi shown in fig. *c*; another Bronze of the Hoard discovered during 1932-33 at Nālandā.

" CXXXVI.—NĀLANDĀ MUSEUM.

(*a*) Bronze Image of a Seated Bodhisattva with Lotus and Thunderbolt: from the Hoard of 1932-33.

(*b*) The Buddha in the *dharmachakra-mudrā*; an almost intact Bronze of the 10th-11th Century A.D.

(*c*) A miniature Bronze Stūpa with Four Niches in which the Buddha is shown in the *dhyāna*, *bhūmisparśa*, *dharmachakra* and *abhaya mudrās*.

(*d*) An unidentified Goddess, and (*e*) A Standing Buddha in the *vara-mudrā*: both from the find illustrated in Plates CXXXIV to CXXXVIII in this Volume.

" CXXXVII.—NĀLANDĀ MUSEUM.

Eleven Bronzes from the Hoard of some 75 Images discovered at Nālandā during the Excavations of 1932-33; including Images of the Buddha in the 'Earth-touching Attitude' (*a*, *b* and *c*); three Figures of a Goddess, probably Tārā (*d*, *e* and *f*); and five Bodhisattvas (*g*, *h*, *i*, *j* and *k*).

" CXXXVIII.—NĀLANDĀ MUSEUM.

(*a*) Stone Image of the Bodhisattva Avalokiteśvara, recovered in the Chaitya Site No. 12 during 1930-31.

(*b*) From Monastery No. 9: Seated and Crowned Buddha Image in Stone. (1932-33.)

PLATE CXXXVIII.—*contd.*

(*c*) Bronze Image of the Buddha in the *bhūmisparśa-mudrā*, from Monastery No. 9; before Chemical Treatment.

(*d*) Stone Image of the Buddha in Meditation in the Deer-park; with Unseen Musicians playing Heavenly Instruments; from Monastery No. 9, Nālandā.

" CXXXIX.—NĀLANDĀ MUSEUM.

(*a*) An Ivory Sandal (probably kept as a Memorial to a Teacher) from Monastery No. 9; after Reconstruction.

(*b*) A Set of Tubular Beads of Glass, recovered from Monastery No. 9 during 1932-33.

(*c*) Specimens of Clay Sealings from a Collection of over 600 unearthed during 1932-33; with Names of Persons, and one with a Figure of the fasting Bodhisattva.

(*d*) A Mango-shaped Terra-cotta Pot; (*e*) An Oil-lamp on Stand in Terra-cotta; (*f*) A Burnt Clay Seal giving the Name of the Village *Harabanda*: and (*g*) A Stone Vajra: All from Monastery No. 9.

" CXL.—NĀLANDĀ MUSEUM.

(*a*) A Miniature Temple of the Bodh-Gayā Type in Bronze, with an Inscription; from Monastery No. 11.

(*b*) Three Bronze Images of the Buddha, before Chemical Treatment, recovered from Monastery No. 11 during 1933-34.

(*c*) Bust of the Buddha in Terra-cotta, from Monastery No. 10; and a Terra-cotta Seal-mould with its Impression in Plasticine, from Monastery No. 11.

(*d*) Bronze Finial of a *stūpa*, with a White Stone inlaid on Top; and a Bronze Crown, originally set with Jewels; both from Monastery No. 11.

" CXLI.—NĀLANDĀ MUSEUM.

1-16. Stone Images and Objects for Religious Service, recovered during Excavations of 1933-34, and now deposited in the Nālandā Museum.

" CXLII.—THE MATHURĀ MUSEUM; AND THE FORT MUSEUM, LAHORE.

(*a*) Curzon Museum of Archæology, Muttra; View of Court 'A'.

(*b*) Curzon Museum of Archæology, Muttra; The Entrance Hall (Court 'B').

(*c*) Curzon Museum of Archæology, Muttra; View of Court 'C'.

(*d*) The Museum in the Old Fort, Lahore; View of New Arrangement.

" CXLIII.—CENTRAL ASIAN ANTIQUITIES MUSEUM, NEW-DELHI.

Two Silk Paintings brought back by Sir Aurel STEIN from the 'Caves of the Thousand Buddhas', Tun-Huang, Chinese Turkistan, pieced together and mounted by the Archæological Chemist during 1930-31; (*a*) A Scene in Amitābha's Heaven; and (*b*) The Bodhisattva Mañjuśrī Seated on a Lion and surrounded by his Suite.

" CXLIV.—CENTRAL ASIAN ANTIQUITIES MUSEUM, NEW DELHI.

Two Fragmentary Silk Paintings from 'The Caves of the Thousand Buddhas', Tun-huang, Chinese Turkistan, acquired by Sir Aurel STEIN, and now mounted by the Archæological Chemist: (*a*) Incomplete Scene in Paradise; and (*b*) A Thousand-armed Avalokiteśvara.

PLATE CXLV.—CENTRAL ASIAN ANTIQUITIES MUSEUM, NEW DELHI.

Two Large Silk Paintings (5′ and 5′ 2″ in height) from Sir Aurel STEIN's Collection of Central Asian Buddhist Antiquities, now chemically treated and mounted by the Archæological Chemist and first published here along with other restored Paintings in the preceding Plates: (*a*) The Paradise of Amitābha; and (*b*) A Thousand-armed Bodhisattva Avalokiteśvara.

„ CXLVI.—CENTRAL ASIAN ANTIQUITIES MUSEUM, NEW DELHI.

Three Pottery Vessels from the Trial Excavations at Chāñhu-daro in Sind by Mr N. G. MAJUMDAR, now restored to their original Shapes from Hundreds of Fragments. (Heights: *a*, 2′ 2″; *b*, 2′ 3″; and *c*, 11″).

„ CXLVII.—TREASURE-TROVE.

From a Find of 223 Bronze and other Metal Images *etc.* made at Kurkihar, near Gaya, now deposited in the Patna Museum: (*a*) The Bodhisattva Avalokiteśvara; (*b*) A Crowned Buddha; (*c*) A two-armed Tārā; and (*d*) Lokanātha(?). (Reproduced by kind permission of Mr K. P. JAYASWAL.) 7th-10th Century A.D.

„ CXLVIII.—TREASURE-TROVE.

The Kurkihar Treasure-trove: Buddhistic Bronzes of the 7th to the 12th Century A.D., including Crowned Buddhas in the *abhaya-mudrā*, a Goddess, and Votive Objects; after Treatment by the Archæological Chemist. Now in the Patna Museum.

„ CXLIX.—TREASURE-TROVE.

Further Specimens of the Kurkihar Bronze Find: This and the Preceding Plate showing unpublished Buddhistic Images from the 7th to the 12th Century A.D.; and of a very varied Quality; including a seated Buddha-figure of great Beauty and a 'barbarous' Tārā (?). Now in the Patna Museum.

„ CL.—TREASURE-TROVE.

(*a*) One of two Fragmentary Images of Sūrya (*c.* 11th Century A.D.), found at Jora, near Bogra Town.
(*b*) The Boar *avatāra* of Vishṇu; a Stone Sculpture found together with the Sūrya Image shown in fig. *a*.
(*c*) Naṭarāja: A Stone Sculpture of *c.* the 11th Century A.D., found at Govindpur in the Sundarbans, 24-Parganas.
(*d*) Colossal Vishṇu Image in Black Basalt from Itahar, Dinajpur, now in the Indian Museum, Calcutta; about 11th Century A.D. (ht. 7′).

„ CLI.—TREASURE-TROVE.

From a Find in Deulberia Village, District Bankura: (*a*) and (*b*) Front and Back Side of a Circular Stone Relief with a Dancing Figure on both Sides; (*c*) A Pot-bellied Deity; and (*d*) Krishṇa-Balarāma, Vishṇu's Eighth Incarnation; all Works of the 14th-15th Century A.D.

„ CLII.—BRĀHMANICAL SHRINE AT DEOTHAN.

(*a*) Ground Plan of Double Brāhmanical Shrine at Deothan.
(*b*) General View of Temple.

PLATE CXLV.—CENTRAL ASIAN ANTIQUITIES MUSEUM, NEW DELHI.
Two Large Silk Paintings (5′ and 5′ 2″ in height) from Sir Aurel STEIN's Collection of Central Asian Buddhist Antiquities, now chemically treated and mounted by the Archæological Chemist and first published here along with other restored Paintings in the preceding Plates: (*a*) The Paradise of Amitābha; and (*b*) A Thousand-armed Bodhisattva Avalokiteśvara.

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" CLII.—BRĀHMANICAL SHRINE AT DEOTHAN.
(*a*) Ground Plan of Double Brāhmanical Shrine at Deothan.
(*b*) General View of Temple.

PLATE CLII.—*contd.*

(*c*) The Carving above the Entrance leading to the Pillared Hall.

(*d*) The Entrance to the Pillared Hall showing finely carved Door-jambs, and a Pillar of the Verandah.

" CLIII.—MISCELLANEOUS NOTES; AND TAXILA MUSEUM.

(*a*) Outline Drawing after a "Foot-print of the Buddha" on a Stone Slab from the Shwezigon Pagoda.

(*b*) Outline Drawing after a "Foot-print of the Buddha" from the Lokananda, now in Pagan; slightly damaged.

(*c*) and (*d*) Two Rock-cut Relievoes at Kālañjar, near the Nīlakaṇṭha Temple, with Śivaistic Subjects.

(*e*) Brass Statue of a Bodhisattva from Tibet or Nepal, presented by Sir John MARSHALL to the Taxila Museum.

" CLIV.—BURMESE COINS; AND TAXILA MUSEUM.

(*a*) Some hitherto unknown Burmese Coins.

(*b*) Statuette from Gandhāra, in the Style of Hellenistic and Roman River-gods presented by Sir John MARSHALL to the Taxila Museum.

(*c*) Outline Drawing of an Unidentified (Auspicious) Symbol occurring on Burmese Coins.

(*d*) Obverse and Reverse of a Coin from Halingyi, with Symbols.

INTRODUCTION.

The appearance of this volume in a form different from that of its predecessors needs a word of explanation. For some years past the Annual Reports of the Archæological Survey of India had fallen in arrears for one reason or the other. In the Autumn of 1934 the arrears amounted to as much as four years, and the Government of India decided that the best method of solving the problem was to bring out a consolidated report covering the work of the four years from 1930 to 1934. and to assign the editorial work to a special officer. The selection of an officer for this task was not an easy matter, particularly as the cadre of the Department had been much diminished as a result of retrenchment and retirements. Fortunately, there was available in India a scholar from Europe, admirably fitted for the work, and the choice of the Government fell on him. This was Dr C. L. FÁBRI, a Hungarian, who had been Secretary to the Editorial Board and Co-editor of the *Annual Bibliography of Indian Archæology*, published by the Kern Institute, Leyden, seven volumes of which he had been helping to prepare and see through the press. Thanks to his appointment on special duty for a period of eight months from January 1935, the Archæological Department has been able to bring the chronicle of its activities up to date.

If in many of the Introductions to previous Reports the Editors could justly claim that the year under report had been one "of steady progress", unfortunately this cannot be said for the four years dealt with in the present Report. Although there are a number of discoveries of no mean importance embodied in this volume, the year 1931 marks the beginning of an era of heavy cuts in the grants, of severe financial stress and a general decline in the activities of this Department. All the branches of the Archæological Survey have suffered under the serious handicap of lack of money; excavations had to be reduced to the minimum; conservation has been confined to the most urgent repairs only; and, worst of all, the Department has been forced to "axe" a number of posts. (See chapter 'Personnel' under Section IX.) In addition to these calamities came the loss through retirement of some of the seniormost officers of the Survey, whose ripe experience and expert knowledge could hardly be replaced by the younger members of the staff promoted in their places.

Nevertheless, the two Parts of the present volume will give evidence of constant and careful activity, and of several important discoveries made during the few excavations that could be carried on.

So far as Conservation is concerned, the three thousand and odd monuments protected under the Ancient Monuments Preservation Act have been attended to as much as the reduced funds permitted; every year several hundred monuments underwent minor repairs, and Readers will find in the Section dealing with 'Conservation' an account of some of the major schemes of conservation executed. The archæological gardens attached to some of the important ancient monuments were maintained and, wherever possible, even improved.

Systematic excavations had to be stopped in 1932 at Mohenjo-daro, the most important of the chalcolithic sites in the Indus region; and this will be sincerely regretted by all scholars interested in prehistory. The brilliant results obtained at that place up to the end of 1931, revealing a hitherto unknown high urban civilization, have raised worldwide attention, and it is fervently hoped that in the future funds will be forthcoming to resume the spadework from the point where it had to be abandoned. Excavations at Harappa, the other chalcolithic city, were continued, necessarily on a much reduced scale, throughout the period 1930-1934, and revealed among others a very interesting portion of the town, aptly called by Mr VATS 'The Workmen's Quarters'. In 1930-31 Mr MAJUMDAR completed a reconnaissance survey in Sind started several years ago; the results of this tour are of paramount interest inasmuch as it is now quite evident that there are many more sites belonging to the same cultural epoch as Mohenjo-daro and Harappa awaiting the excavator's spade. One of these, found in the heart of the Punjab, is described by Mr VATS.

Further excavations at Nāgārjunikoṇḍa have not yielded finds of special importance, though some of the reliefs found during the four years under review are again of the same high artistic quality as the sculptures found previously at that ancient Buddhist site.

The operations at another Buddhist site, *viz.*, Paharpur in Bengal, the ancient monastery of *Somapura*, were brought to a successful conclusion during the period under review. Here a monastery of really enormous dimensions, and built according to a splendidly conceived plan, has been entirely laid bare, and Readers will find a detailed description of the results, with a fine site-plan, in the present volume. Included with it is a report by Mr DIKSHIT on the excavation at Satyapīr Bhīṭā, an adjoining mound, where a Temple of Tārā, with many minor structures erected around it. has been discovered.

Excavations have also been carried on at the ancient Buddhist seat of learning, Nālandā, where three more sites have been attacked with very satisfactory results. Among the minor finds uncovered among these ruins was a hoard of hundreds of bronze images representing Buddhas, Bodhisattvas and divinities of the Northern Buddhist pantheon, of great interest for the study of mediæval Indian art. These bronzes have been fully illustrated in the plates accompanying this volume, and a description will be found under the heading 'Museums'. Reference may be made here of a somewhat similar find of bronze images made at Kurkihar which Readers will find discussed under Section VII: 'Treasure Trove'. The importance of these two finds cannot be exaggerated. especially in view of the fact that a number of these images are provided with inscriptions, some of which are dated.

Excavations on a small scale were also carried out at Theh Polar, in the Lahore Fort, at the Bijai Mandal near Delhi, and at a number of minor sites.

In the immediate neighbourhood of Taxila, Sir John MARSHALL discovered two more ancient sites; these have been unearthed by him during the years under review, and a detailed discussion of their import will be found in the pages of the Report. Maung MYA carried out a number of excavations in Burma,

especially in and around Pagan, that locality so rich in antiquarian remains of the middle-ages. All scholars and lovers of Indian art will be interested in the series of remarkable wall-paintings discovered by Maung MYA, and illustrated in the coloured Frontispiece and a number of plates at the end of the Second Part. These *al secco* paintings (many of which represent Hindu gods) in three temples in and around Pagan carry back the history of painting in Burma to the 11th century A.D., thus to a period from which not a single wall-painting was known before.

The epigraphical summary for the four years under review shows no decline in activity; and among the many inscriptions of importance to the history of this continent I may mention two as of outstanding interest in connexion with our excavations at Paharpur and at Mahasthan. One is an inscription by a Buddhist monk, Vipulaśrīmitra, and relates to the repairs and works carried out by him at Somapura (Paharpur), in the Temple of Tārā, and it is of special interest now that this temple has been excavated by Mr DIKSHIT. The other inscription relates to the site of Mahasthan: it is the first record found in Bengal in Brāhmī characters of the third century B.C., and it definitely proves that Mahasthan is identical with the ancient city of Puṇḍravardhana.

It is unnecessary to enumerate the many valuable acquisitions made by the museums during the years 1930-34; but it is hoped that Readers will find much to interest them, especially in the reports of the Indian Museum and those of the small but valuable Museum at Nālandā.

In view of the already very bulky size of this volume it has not been possible to include many Miscellaneous Notes; but I trust that those published will be found of no mean value, particularly a Note on the Buddha's Foot-prints in Burma by U MYA which is a pioneer work in the explanation of many religious symbols.

It is customary to thank at the end of an Introduction those who have assisted with the editorial work. There has been, however, this time a definite departure from the usual practice in the matter of this publication, inasmuch as the Officer on Special Duty deputed to attend to this task had no one to assist him; not even the proofs have been sent to the officers concerned, and Dr FÁBRI had many difficulties in shortening and re-editing the contributions received by him before sending them to the Press. He has cut down some 1,500 type-written pages to 600, and has accomplished his work, over which he has taken the utmost pains and greatest interest, in the brief period of eight months.

J. F. BLAKISTON,

Director General of Archæology in India.

SIMLA,

August 30th, 1935.

PREFACE.

As a novice in the Archæological Survey of India, the present Editor had many difficulties to face; and he would have been unable to accomplish his task but for the great and varied assistance he has had the privilege of receiving from Mr J. F. BLAKISTON, the Director General of Archæology in India. His advice in matters relating to Departmental routine have been of substantial aid to me; he was good enough to revise in its entirety the first two (and most important) Sections of this volume and to suggest many improvements, especially in the wording of the text; he helped to arrange the plates; and he always considered sympathetically any proposal for the improvement and speeding up of the publication. I wish to express here my sincere gratitude to him for all he has done to make my task easier. Mr K. N. DIKSHIT, Deputy Director General, has also helped me a great deal in matters relating to routine work; and he revised several portions of the Section 'Exploration' as well as the whole Section 'Epigraphy' and the chapter 'Personnel'. My sincere thanks are due to him for much friendly advice and numerous corrections. To the other Officers in the Department not only thanks are due for their kind assistance whenever I turned to them for additional information, but also a word of apology for the wholesale abbreviation of their contributions, sometimes resulting in the re-writing of their entire text.

As far as Conservation is concerned, the present text is about one-fourth of that submitted by the Officers; and hardly will a sentence be found that remained unaltered. The principle here followed was that Conservation must be cut down and more space must be left for Exploration and Research. The replacement of a few missing stones here or there, the erection of a concrete beam to support a collapsing roof, and the like, are of the utmost importance among the activities of the Department; but they belong to the everyday routine of all similar institutions in any country, and have very little if any interest for scholars, research workers and lovers of antiquity for whom, after all, the Report is mainly intended. Much more space, therefore, has been allotted for Exploration and Research. Here too I have had to use the blue pencil and re-write many a sentence: nevertheless, on the whole, this Section, as it stands now, is about two-thirds of the original contributions.

Similar generous treatment was possible in the matter of the illustrations, especially since I hit on the fortunate idea, which the Director General approved, of having the blocks printed on both sides of the paper. The latter is somewhat heavier and superior to that used in former volumes, and the result is a great deal of saving without impairing the quality of the plates.

The rest of the Sections (Museums, Treasure-trove, Miscellaneous Notes, Departmental Routine Notes) have again been considerably curtailed. To mention only one instance, there was before me a Museum report which I have cut

down to about one-fifth of the original, although, I believe, I succeeded in summing up all that was essential in it. Brevity and lucidity are not necessarily contradictory terms.

It was my wish to always use diacritical marks when transliterating Indian and other non-English names and words, except of course, the geographical names now current in English usage. The Director General's instructions, however, were that diacritical marks are unnecessary in such texts as *e.g.*, Conservation; the scientific transcription, therefore, is mainly restricted to the Sections Exploration, Epigraphy and Museums; although usually I give the correct form whenever a word occurs for the first time in the text. This is a half-hearted solution, for I am a firm believer in the constant use of diacritic marks; although, evidently, there are arguments *pro* and *contra*.

There are several new features in this volume which Readers will easily discover. Two of them may be mentioned here. One is a Glossary of Technical Terms, the necessity of which is proved by the fact that several technical terms used by certain officers in the Department were unknown to others! I believe, however, that such a Glossary will be found especially useful by Western readers who may know much about the past of India, may be even scholars in Sanskrit and Pali, yet they will be baffled by such simple Anglo-Indian or Hindustani words of the present day as *pucca* (recto: *pakkā*). The other new feature is the Index: a work involving no mean labour, but of paramount importance for a bulky scientific publication. It has always been the intention of the Director General, I understand, that each Report should be provided with an Index; and I am glad to say that I was enthusiastically encouraged when I suggested adding for the first time an Index to any single Report published by the Department.

I wish to add a word of apology at the end of this Preface for any defects or imperfections in this volume. Readers will kindly bear in mind that the time at my disposal was so short that almost every line published in this volume has been written in extreme hurry; that portions of the text and the plates have been sent in batches to the Press to secure speedy printing, so that the first fifty pages and 24 plates were already printed when I had not yet even as much as glanced into Section IV! I must, consequently, crave for indulgence.

My sincere thanks are due to the Manager, Government of India Press, Calcutta, and to the Officer in Charge, Photo-litho. Office, Survey of India, Calcutta, for the whole-hearted co-operation I have received from them in speedily bringing out this much belated book.

C. L. FABRI.

SIMLA,

August 30th, 1935.

ADDENDUM.

Identification of Nāgārjunikoṇḍa Relief in Plate XL, b.

While revising the text in the second proof, I have been able, I believe, to identify one of the recently discovered Nāgārjunikoṇḍa reliefs published in Plate XL, *b* of this volume. It is probably a fragment of a series illustrating the *Vidhura Jātaka.* If this identification is correct, then the bottom panel shows the wise man Vidhurapaṇḍita seated in his hut, and before him are the three kings, from left to right: Sakka, the King of the Devas, identifiable by his mount, the elephant, standing behind him; Varuṇa, the Nāga king, with his hood of *nāgas*; and Dhanañjaya, the Koravya king, again with a snake-hood. There are two attendants behind the three kings, and trees, monkeys and rocks to symbolize the sacred grove of the hermit.

The upper panel shows on the right the Yaksha Puṇṇaka riding on his magic horse in the disguise of a handsome young man in the Himālayas; on the left he is again in his original shape of a snake-hooded *yaksha*, delivering the wise Vidhura into the hands of the King of the Koravyas who is seen seated with his back turned towards the spectator; and behind Puṇṇaka is seen the Princess Irandatī whom he receives in exchange for Vidhura. The remarkable ornament on the forehead of the elephant in the lower compartment may represent the jewel given to Vidhura as a reward for his judgment concerning the virtues of the three kings.

What is missed, however, in this identification, is the dice-scene; but the magic horse is distinctly shown, and this makes the identification very probable.

C. L. FÁBRI.

In 1931-32 the Saracenic lamp hanging in the main gateway accidentally fell and was damaged, and had to be thoroughly repaired. In 1932-33 Mr KURAISHI's conservation work included the dismantling and repairing of a *gul-dasta* on the inner façade of the Sirhi Darwaza, and the rebuilding with *lakhaurī* bricks in lime of a section of the enclosure wall of the Taj for a length of some sixty feet. The plinths of the northern *dālāns* of Satiu-n-Nissa Khanum's tombs have been thoroughly repaired. The gate of Katra Umar Khan has been restored with stone slabs and lime concrete.

In the year 1933-34 further work was carried out to the east of the main entrance where the dusty floors of the *dālāns* have been completely re-paved.

The Chini-ka Rauza, Agra. This monument is assigned by tradition to Mulla Shukrullah of Shiraz. (Cp. *Ma'āṣiru-l-Umarā*, Persian text, vol. I, p. 150). The *dāsā* stone at the south side was restored in 1930-31; the closed doorway of the tomb towards the north was opened up and the grounds have been improved.

The Rambagh, Agra. The *chhatrī* at the south-east corner of this monument has been thoroughly repaired in 1930-31. In 1932-33 the dilapidated, unsightly stables at the gate of the Bagh have been dismantled and the *débris* removed.

The Char Bagh, or Bagh-i Gulafshan, Agra. During the year 1930-31 Mr H. L. SRIVASTAVA had the silt cleared from the well, and suggested that the place should be excavated. This garden was laid out by the Emperor Babur, and it can be expected that eventual excavations would expose pavilions, garden palaces, tanks, *etc.* (Cp. BEVERIDGE, *Bāburnāma,* fasc. III, p. 532).

Monuments in the Agra Fort. While replacing in the ***Diwan-i Am*** a stone bracket supporting roof slabs, a portion of the roof had to be dismantled above the slabs in question in the year 1931-32; and here inverted empty earthen jars, 12-14″ high, were discovered placed in regular lines,—probably in order to reduce the weight of the roof, or to make it cooler. In the same year a *sāl*-wood railing was provided at the open doorway in the ***Bangali Burj*** in the Akbari Mahal for the protection of visitors from falling into the moat outside.

In the courtyard of the ***Akbari Mahal*** the paving stones had subsided in several places with the result that water ponded in the depressions and discoloured the stones. The floor was, therefore, dismantled and relaid to grade and partly replaced by new slabs. The stone paving round the Anguri Bagh had disappeared; this has been restored.

The Tomb of Itimadu-d-Daula, Agra. In 1931-32 and 1932-33 a number of missing *pietra dura* inlay pieces have been replaced by the engravers employed departmentally at this monument

Burhia-ka Tal, outside Agra. This monument is situated 14 miles from Agra on the road to Tundla. The plinth, including the face stones and corner stones, was repaired in 1930-31 with new stones, and the jungle cleared all round the building.

Sikandra. The dusty floors of rooms and galleries in the first and second storeys of the arched verandahs and on the staircase of the tomb of the Emperor

Akbar have been paved with stone slabs during the years 1930-31 and 1931-32. Moreover, the broken *kanguras* and dislodged *jālī* railings and brackets were repaired and replaced where necessary. Some of the inlay work on the façades has also been restored.

The so-called Tomb of Maryam underwent minor repairs during the years 1930-31, 1931-32 and 1932-33. The deteriorated arch-stones of the central arch on the west, the wooden gate. a broken stone bracket supporting the *chhajjā*, decayed stone slabs and corner stones of the plinth, and the jamb of an arch have been restored or replaced.

Fathpur Sikri. During the rainy weather of the year 1930 the upper roof of the Zanana Rauza collapsed. The necessary repairs were carried out during the years 1930-31 and 1931-32. These included the rebuilding of the north wall and the restoration of some of the graves which had been damaged by the collapse of the roof. (Plate I, *a*-*b*).

Considerable repairs were carried out by Mr H. KURAISHI in 1933-34 in the *Dargāh* of Shaikh Salim Chishti. A fallen kiosk over the north *dālān* of the Mosque has been rebuilt; the missing *chhajjā* stones over the parapets below the kiosk, decayed stone slabs of the pavement in the courtyard and a number of missing inlay pieces in the jambs of the central *miḥrāb* have been replaced by fresh ones, and other minor repairs have been made. In the same year a teak-wood door of Mughal design has been provided for the tomb of Bale Mian. The Diwan-i Am underwent several repairs; in the south-west *dālān* the floor had been paved some years ago by the Public Works Department, but the repavement was not in keeping with the Mughal design, and the Superintendent replaced the floor by a suitable new one in the year 1931-32. Further repaving work was carried out in the south wing during the year 1932-33. Both the Rang Maḥal and Jodh Bai's palace have been improved by stone flooring laid during 1930-31, 1931-32 and 1932-33. The roads leading to the Dak Bungalow and to the Buland Darwaza have been thoroughly repaired in 1931-32 and 1932-33.

Jagner Fort. The cracked lintel supporting the roof slabs of the main entrance has been replaced in 1931-32 by a fresh one of similar design. The old stone lintel has been kept in a secure place in the Fort since it bears an inscription in *devanāgarī* characters recording the name of the Paramāra king Mahāraja Jagmal. Unfortunately the text has no date and does not shed sufficient light on the history of the Fort which is believed to owe its origin to the Hindu rulers of the country, not to the Paramāra kings of Mālwā. A *devanāgarī* epigraph on the gateway of the inner court records the fact that the Fort had been rebuilt in the Samvat year 1628 (equivalent to 1571 A.D.) by the Emperor Akbar. During the years 1932-33 and 1933-34 further minor repairs were done to the stone facing of the main gate, and to the dilapidated Baradari.

Bareilly: the Tomb of Hafiz Rahmat Khan. Hafiz Rahmat Khan was a Rohilla who distinguished himself during the administration of 'Ali Muhammad Khan, and acquired for himself Bareilly and Pilibhit. It was on account of his great military genius that 'Ali Muhammad Khan, in supersession of his son Sa'dullah Khan, entrusted to him the supreme administration of affairs,

His good luck turned, however. He was unable to pay back forty lakhs of rupees which the Nawab Shujau-d-Daula had paid for him to the Mahrattas for the protection of his territories, and the Nawab sent a large force against him under the command of General Champion. Hafiz Rahmat Khan was killed in action by a cannon ball on the 10th Safar, 1188 A.H. (*i.e.*, the 23rd April 1774 A.D.).[1] The erection of his tomb was started in 1775 by Rao Pahar Singh; the ornamental canopy of plaster over the grave is said to have been erected by Zulfiqar Khan in 1776. The monument was completed eventually in 1834 by his daughter as recorded in an inscription over the door.

Repairs to this monument were first done during the year 1930-31, when the jungle was cleared, and portions of the wall rebuilt after the eradication of the roots of the trees. Two teakwood doors of Mughal design have also been provided. In 1931-32 cracks in the dome and on top of the walls have been filled with cement mortar, and the opening in the platform round the north-west bastion has been filled up.

The Jami Masjid at Sambhal, Moradabad. The *pushta* (or support) walls at the back and south side of the mosque have been partly reconstructed with *lakhaurī* bricks and relaid with a new coping of 4½″ lime concrete during the years 1930 to 1933. The west wall has been cleared and replastered. Three teakwood doors of Mughal design have been provided, cracks in the roof grouted with cement mortar, and expanded metal frames provided to the openings of the north and south walls in order to prevent pigeons from entering the prayer chamber.

Meerut Monuments. At the Tomb of Shahpir the floor has been laid with stone flags, and several pillars with their bases as well as facing stones of the plinth have been replaced by new ones during 1930-31. The following season the courtyard of this tomb was relaid with lime concrete, and the land pertaining to the monument has been demarcated by fixing nine boundary pillars of stone. During 1932-33 the south-east face of the basement has been repaired with *lakhaurī* bricks in lime, and the floor of the verandah was relaid with fresh lime concrete.

Conservation work was also carried out in 1931-32 and the subsequent years at the Tomb of Abu Muhammad. Four *śīśam* doors have been provided to the four bastions, the doors were treated with boiled linseed oil, and under-pinning, pointing and floor repairs have been done where necessary.

Lucknow. The annual repairs to the Residency during the four years under report included whitewashing and painting; pointing and refixing of boundary pillars, repairing roads, *etc.* In 1932-33 stone tablets were erected to mark the various positions of the siege of 1857. During 1933-34 a portion of the roof of the *tah-khāna* was renewed as the beams had decayed. The guns of H. M. S. *Shannon* underwent repairs during 1932-33 and 1933-34. The wooden carriages and some of the metal fittings had decayed considerably, and they have been thoroughly renewed; the painting was done according to the suggestions of the military authorities.

[1] *See* ELLIOT and DAWSON :—*History of India as told by its Historians*, Vol. VIII, pp. 302-12.

The Kufa Masjid, Lucknow, underwent considerable repairs during the years 1932-34. The roofs of several *dālāns* were made watertight by the removal of the old and decayed concrete, the *sāl*-wood beams being replaced by fresh ones, after which new lime concrete has been applied. A new *sāl*-wood door has been provided; the main entrance (which had been blocked up for some time) has been re-opened; cracks in the walls and arches have been filled in with cement mortar; the missing ornamental *jālīs* of the Rauza replaced by new ones, or restored where possible, and minor repairs were done to drains and cornices.

Extensive reconstruction work was carried out in 1931-32 at the Qaisar Bagh, where the west gate has been thoroughly repaired, the doorjambs have been rebuilt, and the copper sheet covering and brass flowers, which originally formed part of the ornamentation, restored. It is a matter of regret that the east gate cannot yet be taken in hand for want of funds.

The *Dargāh* of Hazrat 'Abbas was attended to in the years 1930-31, 1931-32 and 1933-34. Besides the annual minor repairs, the roof received special attention, portions of the collapsed masonry of the *zanāna* and of the back wall have been rebuilt, and the passage of the gateway has been relaid with lime concrete. Unserviceable beams have been replaced by fresh and better ones, the tiled roofs of the shops attaching to the *dargāh* were renewed, and repairs were carried out to the wooden gate frame. Some of these repairs were covered by contributions received from the Husainabad and the Shah Najaf Trusts.

Mr SRIVASTAVA carried out several repairs on the Nadan Mahal during the years 1930-33. According to tradition this tomb contains the remains of Shaikh Abdur Rahim Lakhnawi, who was a *shaikhzāda* of Lucknow and a Commander of Seven Hundred in the 40th year of Akbar's reign. (*'Ain-i Akbarī*, vol. I, p. 470). After his death his wife Kṛishṇā, a Brahman woman, spent much money in laying out gardens and erecting villas, in one of which he was buried. "She entertained every one", writes Prof. BLOCHMANN, "who passed by the tomb, from a *panjhazari* to a common soldier, according to his position in life." The broken and collapsed portions of the masonry of this tomb and of the graves have been restored, and the southern compound wall has been raised by two feet in order to prevent the garden being used as a thoroughfare.

Besides the above mentioned repairs, minor conservation work was carried out on a number of other monuments in and around Lucknow. These include the buildings of Sikandar Bagh, the Dil-kusha Palace, 'Alam Bagh (5 miles outside Lucknow, on the road to Cawnpore), the grave of Sir Henry Lawrence, *etc.*.

Jaunpur. Considerable repair works have been done on the Char Ungli Masjid at Jaunpur, about three miles north-west from the railway station. In 1930-31 the roof was made watertight, boundary walls have been raised, the domes that were on the point of collapsing have been supported and buttressed, and the floors were renewed.

The most important conservation work, however, was the thorough repair of *the Bridge of the Emperor Akbar.* Mr SRIVASTAVA started the work in 1931-32 and Mr H. KURAISHI brought it to completion in the subsequent year. This bridge was built in or about the year 975-76 A.H. (1567-68 A.D.)[1] by Munim Khan Khan-i Khanan who, after the defeat and death of Khan-i Zaman, was appointed to his *jāgīr* in Jaunpur in 974 A.H. (1566 A.D.).[2] According to an inscription on a pier of the bridge it was constructed under the superintendence of Afzal 'Ali, a famous architect of Kabul, and its estimated cost ranges from 14 to 30 lakhs of rupees.

The story of the construction of the bridge is as follows. One night the Emperor Akbar heard the lamentations of a poor widow who was unable to get across the river. Deeply impressed, the Emperor himself ferried her over to the other shore, and ordering boats to be stationed at the *ghāṭ* for similar occasions, he talked to Munim Khan on the necessity of building a bridge. Next day the Khan-i Khanan appeared before the Emperor, and offered to undertake the erection of the bridge at his own cost in commemoration of that nocturnal adventure of his sovereign.

Important parts of the bridge which received special attention in 1931-32 were the series of compartments on the northern extremities, those surrounding the stone statue of the lion and the kiosks on the southern bridge (which are proposed to be let as shops in order to avoid their misuse by the public). Their floors have been paved with stone slabs; the ruined kiosks to the south of the lion statue have been rebuilt, and door leaves were provided whereever they were missing. The pillared kiosks on the northern portion of the bridge crowning each of the piers of the arches are proposed to be left vacant; and as three of them were in a very dilapidated condition, two have been rebuilt in 1931-32 by Mr SRIVASTAVA (Plate I, *c*), and the third one by Mr H. KURAISHI in 1932-33. The *jālī* work railing round the lion statue was damaged twice; once by a bullock cart, the second time by a careless 'bus driver. The latter was made to pay Rs. 100 as damages, and the railing has been properly restored.

The roofs, walls and domes of the tombs of Qulich Khan and of Sher Zaman Khan were made watertight in 1932-33. The former monument is on the Sultanpur road.

Allahabad. Besides usual repairs to the Khusru Bagh, the Zanana Palace (inside the Fort), *etc.*, two new teakwood doors of Mughal pattern have been provided at the upper floor of the staircase of Sultan Khusru's tomb in order to prevent accidents. (1930-31).

[1] *Prof.* BLOCHMANN (his translation of the *'Ain*, vol. I, p. 318), finds the date of the construction in the words صراط المستقيم which yield 981 A.H. The inscription, however, in which these words occur appears on the top of the 1st pier at the north and on the east side, and according to it the numerical value of بد *i.e.*, 6, is to be subtracted from 981, thus giving the date 975 A.H.

[2] Dr FÜHRER (*Sharqi Architecture of Jaunpur*, p. 17) believes on the authority of Khairu-d-Din, the author of the *Jaunpurnāma*, that Munim Khan was made Governor of Jaunpur in 972 A.H. But the contemporary historians Muḥammad Qāsim Firishta (*Tārīkh-i Firishta*, Persian text, Lucknow edition, p. 257) and Mullāh Abdu-l-Qadīr Badaunī (*Muntakhabu-t-Tawārīkh*, Persian text, Calcutta edition, vol. II, p. 101), assign to his appointment a date two years later, *i.e.*, 794 A.H.

Mainpuri. The *'īdgāh* at Rapri is situated on a metalled road, some 10 miles from Shikohabad Railway Station. The north bastion which was in a dilapidated condition was thoroughly repaired in 1930-31 by Mr SRIVASTAVA with fresh bricks of a special size. The plinth and a portion of the south bastion have also been rebuilt, as well as several of the missing *kanguras*.

Banda. An agreement having been reached in respect of the Jami' Masjid, repairs were done to this monument for the first time in 1930-31. The broken minarets on the top of the east and west walls have been rebuilt on the model of the existing ones; the roof has been made watertight, the jungle cleared, and other minor improvements have been carried out. In 1932-33 *débris* was removed in front of the colossal rock-cut image of Śiva, and several repairs were done to the *Nīlakaṇṭha* temple as well as to the Fort. The Department reconstructed in 1930-31 a great deal of the third gateway of the Kalanjar Fort, and a number of steps between the two gateways leading to the Nīlakaṇṭha temple. These steps are used yearly by thousands of devotees who gather here during the *melā* days to bathe in the adjoining *Svargārohaṇa* tank, and to offer worship at the temple. The *dālān* to the north of the Nīlakaṇṭha temple has been converted into a sculpture shed, and the compound generally tidied.

Jageshwar, Almora District. The slate-roofed *maṇḍapas* in front of the *Mṛityuñjaya* and the *Daṇḍeśvara* temples have been repaired and made watertight: the door leaves of the former temple have been restored; the broken portions of the compound wall on the south rebuilt and a retaining wall constructed on the river side to keep the Alaknanda river from damaging the foundations of the boundary wall. These works were executed in 1931-32 by Mr SRIVASTAVA; in the subsequent year Mr M. H. KURAISHI had a wall constructed on the south-west side of the *Navā Devī* temple, again to prevent the river from undermining the embankment, and the floor of the Daṇḍeśvara temple has been relaid with stone flags by order of the same officer. The roof of the *Badrīnāth* temple was made watertight.

Garhwa, District Allahabad. In accordance with Rai Bahadur Daya Ram SAHNI's instructions, Mr SRIVASTAVA constructed a shed in the place of the *Daśāvatāra* temple, with a roof of stone slabs supported by pillars and pilasters similar to those of the adjoining *Trimūrti* temple in general outline, without attempting, however, to reproduce the delicate carving of the original pillars. (Plate I. *d*). The images of the former temple have been rearranged, after they had been cleaned with *sajjī*, soap and hot water.

Mirzapur: the Forts of Chunar and Bijaigarh. The Tomb of Iftikhar Khan at Chunar underwent repairs during the years 1931-32 and 1933-34. The compound walls, especially on the south, have been thoroughly repaired, the roofs of the southern *dālāns* and of the gateway made watertight, and a number of minor works carried out, both by Mr H. KURAISHI and Mr SRIVASTAVA. The latter supplied a note on the possible origin of this tomb. There being no inscription on the building, it is difficult to say whose remains are buried there; especially as there are quite a number of Iftikhar Khans mentioned in Mughal history. "Besides stylistic grounds", says Mr SRIVASTAVA, "which can

be depended upon in such cases, the presence of an inscription slab inside the well opposite the entrance gateway gives us a clue to assigning the monument to Jahangir's reign. According to the *Tuzuk-i Jahāngīrī* and *Ma'āṣīru-l-Umarā*, Iftik͟hār K͟hān was a *manṣabdār* of 1500, whose rank was increased to 2000 in the fifth year of Jahangir's reign for his valuable services in Bengal. He was sent against Usman Khan Lohani, and while commanding the right wing of the Imperial forces, he was killed in action on Sunday the 9th Muḥarram, 1021 A.H. (March 12th, 1612 A.D.)."

The origin of the Fort at Bijaigarh is more uncertain. According to one version, it had been erected by demons in one single night. This information is unlikely to be favoured by the less credulous, who will be more interested in the tradition that Sher Shah was responsible for the later additions, and that there is a tablet with an inscription near the tomb of Saiyid Zainu-l-Abidin, dated Samvat 1829 (1772-3 A.D.) according to which we can assign the Rang Mahal and Shish Mahal to Balwant Singh, the name of whose Governor, Śrī Krishṇa Paṇḍe, is mentioned in the inscription. Subsequently the fort came into the possession of Raja Chait Singh, the ruler of Benares and adjoining districts, on whose deposition the first article of the impeachment of Warren Hastings was based.[1] The Fort has been neglected ever since and is ruined almost completely. The only interesting structure still standing is the gateway to which Mr SRIVASTAVA paid due attention in 1931-32. He also repaired the ruined walls on the north and south, the roofs of the adjoining *dālāns* and compartments, and replaced the unserviceable lintels by fresh ones.

Sarnath: Buddhist Antiquities. The Buddhists of our days who attempt to revive the ancient splendour of this site of their ancestors can look with satisfaction on the 11th November 1931, the day when the *Mūlagandhakūṭī vihāra*, erected by the Mahabodhi Society, was opened at Sarnath. The Archæological Survey had the whole plot round the sanctuary cleared, and the Horticultural Department laid out a park to suit the building. The entire area has been surrounded by barbed wire fencing, and two pathways were constructed of brick ballast spread over with *surkhī* (pounded brick-dust) and lined with brick on edge. One of these pathways connects the new *vihāra* with the Dhāmekh *stūpa*, and the other leads directly to the road track on the south.

On the day of the opening ceremony the then Director-General of Archæology Rai Bahadur D. R. SAHNI, presented to the Society a reliquary containing bodily remnants probably of Gautama the Buddha himself, given to the Buddhists on behalf of His Excellency the VICEROY of India for enshrinement in their newly built sanctuary. These relics were discovered by Sir John MARSHALL during his excavations at Taxila in one of the group of chapels situated to the west of the Dharmarājika Stūpa. They were originally placed in a small golden casket inside a silver one which in its turn was placed in a steatite vessel. The two outer vessels, *viz.* of steatite and silver, had been damaged by a heavy stone slab once placed over the deposit; so that the gold casket containing the relics has been now transferred into another stone casket of about

[1] V. A. SMITH:—*The Oxford History of India*, pp. 536-8.

the same date also discovered at Taxila, and this has been enclosed in a modern reliquary made in Calcutta specially for this purpose at the expense of Government.

During the year 1932-33 Mr H. KURAISHI carried out some works of repair at the same site. Damaged portions of walls have been underpinned with old bricks, and fresh earth has been spread over the tops of the walls to encourage the growth of grass so as to lend them the appearance of naturally exposed ruins. In the following year the same Superintendent started the excavation of drains in order to carry off rainwater that accumulated in and around the ruins during the rainy season. In the course of digging a channel for this purpose, remains of ancient structures have been uncovered. It was then necessary to continue these excavations before determining the exact position in which the proposed drain could be constructed without detriment to the subterranean structures. During this unearthing process several minor antiquities and a few inscribed seals were found, most of them in a fragmentary state, except a small standing image of the Buddha which is in a perfect condition. This stone image is ascribed to the 6th century A.D., and has been placed, along with the other finds, in the Archæological Museum, Sarnath.

The Chandel Temple at Urwara. Sixteen miles south-west of Mahoba, and connected with it by a motorable road, is the village of Urwara. Here, against the south embankment of the *Ratan Sāgar* ("Jewel Lake"), which was practically dry in the month of April 1931, stands a large two-storeyed Chandel temple of coarse granite. The only archæologist who had visited this temple before Mr Madho Sarup VATS was Dr FÜHRER; but he did not leave much information about it. During the rains the lake becomes a very large sheet of water. Three-fourths of the temple, which stands on a plinth 10′ 9″ in height, jut out into the lake, and the remainder is buried beneath the floors of modern village houses. (Plate II, *a*).

On three sides of the plinth are large flights of steps leading down to the lake. The temple measures some 124 feet from east to west and, to judge from the steps in the east verandah, about 85 feet from north to south. The lower storey consists of a large rectangular structure with a single projection for a staircase in the centre of each side, surrounded by a continuous verandah. Each projection of the verandah is partitioned off into three bays in front and two on either side, while the remaining portions of each of the two longer sides are divided into four bays, and each of the shorter sides into two.

Through the central bay of each projection there was once an entrance opposite the flights of steps, now closed by large blocks of stone fallen from the superstructure. The large rectangular structure behind the verandah has no opening, and it is not yet ascertained whether it is hollow or entirely solid. It is over this structure that the temple proper stood in the second storey. The outer line of the verandah is carried on pillars, and the inner one partly on pillars, but mainly on the solid wall at the back of the verandah. Between the outer pillars are sloping back-rests to serve as benches for the convenience of devotees. The pillars have rectangular abaci and cruciform capitals. The verandah forms

the lower or second circumambulatory passage of the temple, and now contains 36 niches on the outside and 44 on the inside. All these niches must have contained images.

In the upper storey, over the rectangular portion in the centre, must have been the shrine, facing east, of which the *cella* has now completely disappeared. What now remains is the cruciform *maṇḍapa* which was originally connected on each side with the flights of steps leading up from the verandah. One of the niches on the west side contains a mutilated image of a dancing Kālī.

The ornamental motifs are simple and consist of architraves of lozenge-shaped quatrefoil rosettes alternating with pilasters; of sunken squares in chess-board pattern; of friezes of alternatively circular and lozenge-shaped rosettes, and a degenerate form of the pot-and-foliage motif. The temple has suffered a good deal from encroachments. Mr Madho Sarup VATS had the modern accretions cleared away from the second storey but there is still five or six feet of *débris* lying on the roof, and about a third of the structure is completely buried under village houses. This is one of the largest temples of the Chandelās, most picturesquely situated, and thorough overhauling is indicated as soon as funds are available.

The Site of Sahet-Mahet, District Gonda. Repair works are done yearly to one or the other of the monuments at this ancient site. In 1932-33 the Department had some 25,000 bricks made of the same shape as the old ones used at that place for further repair work. In 1931-32 temple no. 19 was repaired with lime plaster and pointing where necessary, and fallen masonry of a number of other temples and monasteries was rebuilt. Drainage was improved both in that year and during the following season, when the courtyard of monastery "G" has also been repaved.

Tomb of Shah Abdu-r-Razzaq and his Four Sons at Jhinjhana, Muzaffarnagar. The southern wall of this tomb threatened to collapse during the rains of 1932. It was, therefore, dismantled and rebuilt. The next year similar work was carried out at the entrance gate of this monument.

Temples at Deogarh, Jhansi District. The Kauṛiyā Vīr temple at Deogarh, which was entirely overgrown by dense jungle, has been rescued from further decay by removing vegetation and rank growth from the structure and its surrounding; dislodged stones have been replaced, the leaning porch has been reset into a perpendicular position, missing stones have been restored wherever necessary, and the ground has been dressed all round in a sloping fashion so that the temple stands now high and dry. This work was carried out in 1932-33 by Mr H. KURAISHI.

In the Gupta temple at Deogarh a portion of the compound wall fell during the rains of 1932 and has been thoroughly repaired in the same year by the same officer.

Antiquities in the Farrukhabad District. The south wall of the mosque and tomb of Makhdūm Jahāniān at Kanauj collapsed during the rainy season of 1931. Mr H. KURAISHI had this wall reconstructed in 1932-33; in the same

year the floors of the Kachahrīwālā Gumbad and of the Zanāna Gumbad near Makhdum Jahanian's tomb have been relaid with lime concrete, and stone *parnālās* (gutters) provided to drain off rainwater. The bulged out masonry of the east wall of Bala Pir's tomb at Kanauj was dismantled and reconstructed with *kankar* blocks in similar fashion to the original.

The Elephant Capital at Sankisa stood formerly on a square platform without any protection from sun or rain. During the year 1933-34, Mr H. KURAISHI had a stone shed constructed over this Mauryan monument. This small pavilion (Plate II, *b*) is made of red sandstone, four octagonal pillars with square capitals and brackets supporting a roof of reinforced brick slabs resting on stone lintels.

Rasulpur. In the same plate (Plate II, *c*) is shown a restoration work of outstanding workmanship: it is the right half of the fine *jālī* door (as seen from the spectator's side) which was missing in the western wall of the tomb chamber of Shaikh Ibrahim's Tomb. It is of stone, and has been restored during the season 1933-34 by Mr H. KURAISHI, who also had the fallen south-east corner of the compound wall rebuilt.

Najibabad, District Bijnor. The decayed door of the south-west room in the Tomb of Nawab Najibu-d-Daula has been replaced by a new door of *śīśam*-wood. In the same year, 1932-33, a breach in the wall of the Patargarh Fort has been built up with *lakhaurī* bricks.

Sītā Rāmjī's Temple, Soron, Etah District. In 1932-33 the roof of this temple has been relaid with fresh lime concrete, and a new *śīśam*-wood door of Hindu design provided in place of the broken one in the sanctum.

The Gardens in the United Provinces. Lack of space forbids us entering into details regarding the gardens in and around protected monuments in the care of the Department. These gardens in the United Provinces cover an area of 226 acres, and are looked after by the Deputy Director of Gardens with the greatest possible care. The year 1930-31 was satisfactory, and the gardens were kept in excellent condition, even at Agra where the monsoon ceased earlier than usual. Canna and roses were planted in the Residency grounds, Lucknow, and in the Taj Mahal gardens, Agra, and a number of new varieties were acquired for the Khan-i Alam nursery, Agra, where trees, shrubs, roses *etc.* are grown both for use in the archæological gardens and for sale. In the forecourt of Akbar's Tomb, Sikandra, Malta oranges were interplanted among mangoes.

1931-32 was somewhat less satisfactory, especially at Agra where the unusually severe heat handicapped the horticulturist. The Taj Gardens, however, showed great improvement through the canna and rose gardens, and the Nursery was enriched by a fresh lot of sweat peas. In the Fort of Agra the water supply was unsatisfactory, and it was decided to install an electric pump to replace the old oil engine. Mention has already been made above of the small park which has been laid out freshly round the modern Buddhist *vihāra* of Sarnath. The old well in the Residency, Lucknow, has been very much improved. Wire

netting was placed over it and scarlet Bougainvilleas planted against the structure.

1932-33 was a poor year for the gardens; the heat was severe; many young fruit trees and annuals suffered a great deal. Sir John MARSHALL's suggestion was followed in the Taj Gardens, where several trees were cut down to open the fine view towards the side of the Naubat Khana. In the Fort of Agra not even the freshly installed electric pump was sufficient, because of the restricted number of hours during which current was available. The Ram Bagh trees suffered considerably, though the collection of peach and plum trees planted the previous year have done fairly well.

1933-34 was more satisfactory. A number of grassy plots have been re-trenched and re-grassed at Allahabad, Lucknow and Agra. At Agra a hail-storm caused some havoc, but the Nursery was well kept throughout the year. In the Ram Bagh some Malta and Sangtara oranges have been planted and a plot has been prepared for grape fruit. In the Sikandra grounds a severe storm uprooted a number of trees, and the opportunity was used to plant an avenue of pine trees along the sides of the main causeway and 50 feet away from it.

NORTHERN CIRCLE: DELHI PROVINCE.

The officers in charge of this Province were the same as for the United Provinces, *i.e.* Mr H. L. SRIVASTAVA for the first two years, and Mr M. H. KURAISHI for the years 1932-33 and 1933-34. The following is a very much compressed summary of their reports on conservation during those years. The larger part of the work was done by the Public Works Department in consultation with the Archæological Survey.

The Kali Masjid at Nizamuddin was erected in the year 772 A.H. (1370-71 A.D.) during the reign of Firuz Shah Tughlaq, as recorded in an inscription on the eastern gateway of the monument. Conservation work carried out during 1930-31 by Mr SRIVASTAVA has considerably improved the appearance of this Masjid. The *kacchā* houses built by villagers in modern times around this monument have been acquired by Government, and dismantled. A wire fence has been erected around it at an average distance of 15 feet.

A number of repairs were carried out in the same year at the ***Badli-ki Sarai*** and the ***Begampuri Masjid***. In the latter monument the old paved apron all round the building has been exposed and the floor of the courtyard thoroughly reconstructed. There was a dangerously tilting column in the east *dālān* which has been reset in plumb and the base of which has been replaced by a fresh one. During the following year further repairs have been done to the floors and the drains, and at the Mullā Khāna attaching to this mosque the plinth on the east side has been entirely removed and freshly rebuilt in cement mortar to an average thickness of 2′ 6″. The difference between the old state of this monument and the new is evident from Plate III, *a-b*.

The Tomb and the Baradari of Raushanara at Sabzimandi were in a neglected condition. In 1930-31 the roofs have been rebuilt with concrete, masonry renewed, dislodged stone facings and copings reset in position, and missing portions replaced. Further restoration work was carried out by Mr H. KURAISHI during 1933-34 when the roof of the east verandah of the Barādarī received attention, and parts of the parapet wall, *chhajjā* and terraced roof have been dismantled and rebuilt.

Khairu-l-Manzil Mosque. The Public Works Department executed here several repairs during 1931-32. There were depressions in the floor of the courtyard allowing rainwater to collect and to percolate; these hollows have been filled up with lime concrete, new drains have been constructed on each side, and rainwater is now drained off outside the building.

Purana Qil'a. During 1932-33 a number of major repairs were done to monuments in the Old Fort. The terraced floors of Sher Shah's Mosque and of the Sher Mandal have been repaired with lime concrete, a number of arches have been restored at the Humayun Gate, and fresh handrails have been fixed to replace the missing galvanized iron pipes at the Talaqi Gate.

'Isa Khan's Tomb. During the year 1932-33 a new *jālī* has been provided at the roof of this monument, and the decayed stones in the verandah have been replaced by fresh ones. Tell-tales have been fixed across cracks in the ceiling of the verandah, and a number of small minor repairs were executed.

Nashiman in the Delhi Fort. Portions of the *nashīman* projecting from the Musamman Burj in the Fort had become loose. The Nashīman was therefore dismantled and reassembled during the season of 1933-34.

Sunahri Masjid. In this mosque near the Delhi Fort the drum of the dome and the *parnālās* have been repaired during 1933-34, absorbent patches in the roof have been relaid with fresh lime concrete, and the face stones of the *kanguras* have been secured by copper clamps.

Other Activities of the Department included the provision of overshoes for Westerners in ancient monuments still in use for religious purposes by Muslims (1931-32, 1932-33); a large number of minor repairs to Safdar Jang's Tomb, Ghiyasu-d-Din Tughlaq's Tomb, the Tombs of Humayun, of Muhammad Shah *etc.*, the Mutiny Memorial, the Lal Bangla *etc.;* a large number of descriptive historical notices have been placed in monuments of interest, as it was found that the first set of such notices had been very much appreciated by visitors. (So much, indeed, that some of them had been stolen and had to be replaced by fresh ones!)

The Gardens. 1930-31 had a markedly poor monsoon. However, the gardeners did their best and the archæological gardens in most of the ancient monuments looked very attractive all the year round. Some trees were cut down in the gardens of Humayun's and Safdar Jang's Tombs with the object of improving the vista of the whole lay-out; in the Delhi Fort blue dwarf lupine and nycterinia were planted along the canal channel on the Hai'at Bakhsh terrace, and this combination was a great success both as regards the length of the flowering period and the general effect.

1931-32 was a good year. The new trees and shrubs planted during 1928 in the garden of Humayun's tomb were a great success and improved the grounds beyond expectation. The Qutb gardens flourished splendidly owing to the improved water supply thanks to the new pump. Although the temperature was higher than usual, the gardens of the Delhi Fort too were kept in a fine condition as there was always an adequate supply of water.

Good conditions prevailed during 1932-33 on the whole, although the problem of water supply in some places was always confronting the Horticultural Department. The Qutb suffered from faulty irrigation, according to the report of the Horticultural Superintendent, more than from lack of water; but most gardens as those at the Tombs of Safdar Jang, Humayun or in the Kotla Firuz Shah, flourished very well. The grounds of the Fort in Delhi were looked after with great care, and although in May and June excessive heat was experienced, both the lawns and the floral display proved a success mainly due to the efficient supply of water. The blue dwarf lupines and white phlox lasted for a long time and made a fine show.

The monsoon of the year 1933-34 brought an excess of rainfall, and severe frosts prevailed during January and February. Yet the staff maintained the gardens in as good a state as was feasible, and the grass lawns especially were beautifully kept. This applies to the large grass areas in the Kotla of Firuz Shah, in the Purana Qil'a, in Humayun's tomb *etc.* In the latter gardens hose pipes were introduced, and appear to result in economy and a better distribution of water. Improvements were effected in the grounds of the Qutb, where very effective shrub beds and borders were displayed during the year. The Fort gardens did very well, and praise is due to the staff for their successful activity.

FRONTIER CIRCLE: THE PUNJAB AND THE NORTH-WEST FRONTIER PROVINCE.

During the year 1930-31 the Hindu and Buddhist monuments in the Punjab were in the care of the Superintendent at Lahore; works executed that year have been reported by Mr Madho Sarup VATS. The Muhammadan and British Monuments of that area fell under the charge of the then Superintendent at Lahore, Mr J. F. BLAKISTON, who is also responsible for conservation done in the North-West Frontier Province. During 1931-32, however, all the monuments of the Punjab and North-West Frontier Province have been amalgamated into one Frontier Circle, and Mr BLAKISTON had to discharge the duties connected with all the monuments in these areas under the serious impediment of halved grants. It is a matter for regret that his excellent report on the fine work done by him has had to be summarized like the rest of the reports on conservation. Mr VATS took over charge of the Superintendency for the subsequent year, 1932-33, and references in the following text are taken from the report submitted by him. During 1933-34 Mr BLAKISTON returned from leave and was again in charge of all the ancient monuments of the Circle.

Pattan Munara, Bahawalpur State. An account of this unique brick monument was published in the *Annual Report for 1926-27*, pp. 108-110, and a comparison of Plate XXXIV of that volume with fig. *d* of the present Plate II will give an impression of the splendid work of restoration executed by the Darbar during 1930-31 under Mr VATS' supervision. The whole monument, when taken in hand, was in imminent danger of collapsing. The corners have been first underpinned with well rubbed bricks resembling the original ones. The left-hand, broken jamb was then repaired, and a reinforced concrete lintel of red colour provided to restore the missing part of the dome, a stone lintel not being available. The roof has been cleared of *débris*, the recessed corners below the level of the first floor have been repaired, the broken top of the dome of the *cella* has been capped by a concrete slab, the window with corbelled arch on the front face of the second storey has been thoroughly reconstructed, and finally the tower-like construction corbelled out at the south-west corner between the subsidiary *śikharas* on the south and west sides restored, almost from top to base, with old bricks from the site. Every part of the building has been made watertight and an earthen terrace, 10′ in width, provided around the base with a sloping approach on the west side.[1]

The Temples at Malot and Amb. The so-called gateway to the temple at Malot was in a precarious condition and has been underpinned during 1930-31 with stone masonry in lime resembling the original structure. The dilapidated parts of the plinth of the smaller temple at Amb have been restored in the same year.

Monuments in the Kangra District. The small rock-cut temple to the north-east of the Main Shrine at Masrur has been underpinned with jointed ashlar masonry in cement mortar, and dry stone pitching was done to the sloping side of the tank in front. At Nurpur there stood a kitchen of the District Board High School in close proximity to the plinth of the ancient temple, and the Department had this kitchen removed to another place during the year 1930-31.

It is regretted that the image of *Ambikā Devī* has been stolen from the ruined temple in the Kangra Fort which collapsed during the earthquake of 1905 and has never been restored since. The *ashṭadhātu* image of a seated *Ādinātha* in an adjoining temple has also been slightly damaged. The miscreants were, however, arrested and punished. This happened in 1932, and during the year 1932-33 a number of sculptures found in the courtyard have been stored in the south-west *dālān*, and both these structures have been provided with grated iron doors and windows to prevent further thefts. An assistant *chaukīdār* has been appointed, and stricter watch is being kept over the Fort area.

During 1931-32 Mr BLAKISTON carried out special repairs at the old temple at Baijnath. These consisted of the removal of modern plaster from the entablature and from the *kīrtimukha* of the pediment in front of the spire, thereby revealing the original ornamental stone sculpture. This work was executed after some opposition by the *pujārī* and other worshippers as a plaster image of

[1] It seems to the Editor that the date assigned by Mr VATS to this monument ("later Gupta") is somewhat early.—

Gaṇeśa had to be removed—before the original of the same deity could be brought to light. The old carving on the pillars and architraves has also been uncovered. (Plate V, *a.*) Where it used to leak badly, the roof of the *dharmaśālā* has been replastered after the old and decayed plaster had been removed.

Harappa. Here the existing godown became overcrowded, and a new and larger room has been erected during 1930-31 in order to make room for further finds and to allow a better display of existing exhibits. The new building is behind the old one, and measures 45 by 16 feet. New quarters have also been built for the Museum *chaukidārs.*

Lahore: the Fort. An old building of the time of the first British occupation of the Fort has now been converted into quarters for the peons, caretakers, gardeners *etc.*, and by this measure Mr Blakiston provided clean and healthy living quarters for the inferior staff instead of the dirty hovels in which they used to live all about the Fort.

During 1930-31 the same Superintendent completed the dwarf walls on the ruined compartments surrounding the Diwan-i Am Courtyard. Owing to the uncertainty as to the position of the wall on the east, excavations had to be carried out, and these proved successful inasmuch as the old foundations were discovered. It was found that a series of arches originally extended along the eastern side in front of the Masti Gateway, and these have now been reconstructed up to the height of the other walls around the court, *i.e.*, some 15 feet from the foundations. (Plate III, *c.*) During the following year the space originally occupied by the compartments was planted with plants and shrubs at a considerable expense, and it is a matter of satisfaction that they have very much improved the appearance of the gardens.

Special conservation measures were commenced in 1930-31 at the Hazuri Bagh Gate with its adjoining buildings, and the Hathi Pol, and completed during the subsequent year. At the Hathi Gate the work consisted mainly of rebuilding the floor on the upper storey. At the Hazuri Bagh Gate much patching was done to the brickwork on the ground floor and the first storey, open joints have been pointed, the ceiling of the room over the centre gateway, which was in a very dangerous condition, was also taken down and a new one of reinforced concrete has been constructed in its place. The next year attention was paid to the upper storey and the kiosks; the large rectangular room has been re-roofed with reinforced concrete and the floors of the rooms beneath the kiosks and those of the passages around them have been paved with tiles obtained from dismantled modern buildings in the Fort area. Besides a number of minor repairs, mention should be made here of the drains constructed between the Hathi Pol and the outer entrance to the Fort: an important measure, as rainwater used to collect at the entrance gate.

Under the Superintendency of Mr Blakiston, the lay-out of the court between the Moti Masjid and the Hammams was completed during the year 1931-32. (Plate IV, *a-b.*) Here the retaining wall and the steps at either end of it along the east side of the court have been completely repaired; and this work necessitated repairs to the herring-bone patterned paving in specially

made small brick and black marble along the top of the wall. The whole area has been thoroughly cleaned, pathways constructed, and grass and flowerbeds planted in a pleasing style.

Both the inner and the outer faces of the outer wall of the Fort underwent repairs in the years 1931-33. Much of this wall is constructed of brickwork in mud, and it is feared that it will be a perpetual cause of trouble.

Special repairs were carried out to the Khil'at Khana Courtyard during 1932-33, which consisted in raising two feet high the walls of the rooms on the north and south sides of the courtyard to the height of the walls on the other two sides; in the restoration of the ornamental pavement with new small bricks on edge laid after the original pattern, emphasized with black tiles at regular intervals; and in supplying the missing *dāsā* stones and bases of the lost pillars on the south side. (Plate III, *d*.)

The Masti Gate which was in an exceedingly dilapidated and insecure state, has been much improved as a result of extensive repairs carried out during the years 1932-33 and 1933-34 by Mr BLAKISTON. More funds are still needed to complete this most urgent and important conservation work, but the restoration of the roof and floors, the filling of serious cracks, supporting of arches and doorways, and the very considerable amount of underpinning and brickwork repairs done by him have already corrected the most serious ravages of the centuries, and it is hoped that with some further work the structure will be entirely sound. (Two illustrations in Plate IV, *c* and *d* show the inner façade of this Gate before and after conservation.)

The water supply to the gardens of the Lahore Fort has been considerably improved by the sinking of a new tube well twenty feet east of the former one in the moat. The two wells have been linked by a tunnel, and are worked by the same engine without any increase in the annual operation cost. (1932-33.)

During the last year under review a further cut in the allotted grants did not allow any special restoration work to be executed in the Fort, except that on the Masti Gate mentioned above. Certain rooms of the Shish Mahal have been re-floored, nevertheless, and petty repairs were done to the masonry of the buildings on the west side of the Moti Mosque quadrangle, to the roof of the Chhoti Khwabgah, to the Bari Khwabgah, the steps of the Hathi Pol *etc.*

A two anna entrance fee is now levied from visitors to the Fort, and a sum of Rs. 2,957 was realized during the year beginning from March 1st, 1933.

Monuments at Shahdara. Jahangir's Tomb received the attention of the officer in charge during all the years under report. It would take much space to give an account of the numerous repairs carried out here, and it may suffice to mention that several causeways have been entirely renewed by laying brick on edge and black marble in the original ornamental patterns; the walled sides of these causeways having been also thoroughly repaired in many places. Loose marble railings around the *manzars;* the decayed ornamental ceiling of the tomb chamber, and many drains and pavements have been repaired in strict adherence to the original style. A large number of similar minor repairs was also done to the Akbari Sarai, that monument attaching on its west to Jahangir's Tomb,

during the years under review great improvements were effected especially to the *dālāns* of this Sarai.

The wall of Asaf Khan's Tomb has also been repaired for a length, and ordinary maintenance work was regularly carried out at Nur Jahan's Tomb.

The Shalamar Gardens, Lahore. During the year 1931-32 a beginning was made to restore all the fountain-heads which were then in a dilapidated condition; they had been repaired formerly without discrimination or expert knowledge, and no two resembled each other. Thirty-two new ones of Agra sandstone have been fixed during 1931-32, thirty-three in the following year, and thirty-nine in 1933-34; the rusted pipes have also been replaced by copper ones. The marble dado slabs around the central *barādarī* having become loose, have been dismantled, and after thorough repairs to the backing they have been reset properly. Besides these, a number of minor repairs included the rebuilding of the two *burjīs*, replacing of decayed red sandstone work, rebuilding of fallen portions of walls and the like.

Chauburji Gateway, Lahore. A fencing has been constructed round this structure, consisting of an iron chain fixed to *muttakā* posts of stone embedded in a low enclosure wall built of country brick in lime. The appearance of the monument is now greatly improved.

Ranjit Singh's Baradari, Hazuri Bagh, Lahore. The upper storey of Maharaja Ranjit Singh's *barādarī* collapsed suddenly at about 10 *a.m.* on the 19th July, 1932. The cause of this mishap may have been either a heavy rainstorm or the action of the wind, or both. The *débris* of this upper storey has been removed to the Fort, and it is regretted that this interesting monument cannot be restored at this time of restricted grants; indeed, funds are not even available to render the lower portions safe!

Sheikhupura. A considerable amount of money and work was spent on the clearing of the tank from reeds, weed and water-grass which, if they had not been thoroughly eradicated, would have blocked the whole of the tank. Mr Blakiston restored during 1933-34 the broken lime concrete floors of the central rooms of the *barādarī* and of a room at the top of the Hiran Minar with 1½" thick red sandstone pavement stones laid on *kankar* lime concrete. A great deal of underpinning and patch-work was done to the surrounding walls of the tank.

The Begam-ki Sarai, Attock. As mentioned in the *Annual Report* for 1928-29, preliminary measures for the conservation of this very much ruined building were undertaken as long ago as 1921; serious work was taken in hand only in 1928-29, and the subsequent years.[1] Mr Blakiston completed the work, as far as feasible, during 1930-31, when he removed the modern dressed stone piers erected in the doorways to support the cracked lintels, and in their place reconstructed the original lintels.

Aurangzeb's Baoli at Kharian. Early in the year this well, known as "Aurangzeb's *bāolī*", at Kharian, Gujarat District, was reported to be collapsing; and large portions of the retaining wall fell actually a few days later (Plate II, *e.*)

[1] See *Annual Report* for 1929-30, p. 18.

As the structure was of no great archæological interest, and as very considerable sums would be required to preserve it, but as it was imperative to save a small mosque and other buildings standing within a few feet of it from slipping into the cavity: it was decided to fill in the stepped portion of the *bāolī* and merely retain the well at the bottom of the steps. The cause of the collapse was apparently the pressure of water which has risen considerably in these parts, at the back of the walls, which being for the greater part only of brick-in-mud were unable to withstand any longer the strain. The work had to be undertaken in great haste for there would assuredly have been further subsidence with the advent of the monsoon, and damages would have been claimed by householders if their houses had collapsed. This monument has now been removed from the list of Central Government Protected Monuments. (1930-31.)

The Akbari Baoli, Gujrat, is another rather uninteresting brick structure which threatened to collapse and was thoroughly insanitary. Mr BLAKISTON carried out the repairs here as well as at the monument mentioned beforehand, very grudgingly, as so many works of a much more interesting and more important nature are awaiting funds. Yet the work *had* to be undertaken, as a number of houses built right on the edge of the well would have collapsed if the walls had subsided; and a pumping plant had to be secured and was kept working for several weeks in order to keep the level of the water down to permit the workmen to reach and carry out repairs to the brickwork.

Rohtas Fort, District Jhelum. Part of a large hollow at the foot of the Khwās Khānī Gate (the main entrance) to this Fort has been underpinned during 1932-33 with coarse rubble stone masonry in lime; but further repairs are needed and must be carried out as soon as funds allow.

The Mughal Bridge over the Budhianwala Nala. The tremendous rush of water in the stream under this bridge in the Gurgaon District has annually added to the erosion work of the centuries, and urgent repairs were indicated in order to save it from utter collapse. The work was started in 1932-33, and almost completed in 1933-34, by Mr BLAKISTON, leaving only the superstructure unrepaired, but it can be said that the understructure is now very sound. (The monsoon of the last year under report brought an unusually large volume of water down the stream, yet the repaired bridge stood the action of the water admirably). Not only have the piers been underpinned and repaired, but a strong paving of undressed stone blocks has been laid both up- and down-stream, making thus the bridge secure and safe.

The Old Monuments of Navankot, near Lahore. Major repair work was done to the old gateway and two corner towers at this place during 1933-34 by Mr BLAKISTON.[1] The conservation of these monuments cannot be said to be complete, but fencing was erected around the three structures (Plate V, *b*; showing the gateway), and a considerable amount of finely dressed brickwork was done, besides repairs to the roof, floors and pavement.

The Gardens. The gardens of the protected ancient monuments at Lahore and Shahdara were maintained as usual by the Superintendent, Government

[1] Cp. *Annual Report* for 1928-29, p. 23.

Archæological Gardens, with the financial help of the Government of the Punjab. The establishment at the Shalamar Gardens has been reduced by the Provincial Government in 1931 by 11 men, and at the Shahdara Gardens by 15. "These reductions", as Mr BLAKISTON remarks, "will not tend to the efficient upkeep of the gardens, which are bound to deteriorate in consequence of them". The wisdom of such a measure is seriously doubted. The staff was handicapped all through the last three years by financial stringency, and hardly any improvement was possible. In 1930-31, with somewhat more money at hand, four grass plots at the northernmost end of the Shalamar Gardens have been lowered some nine inches to permit of their being watered from the water channels running down the centres of the pathways, and some twenty old connecting channels under the latter ones were made serviceable again. This had the most beneficial results the next year. Shrubberies in this terrace have been planted some years ago, and continued to improve, especially in 1932, when balsams, Michaelmas daisies and cockscombs in the flowerbeds made a fine show. The spring display of that year was brilliant. In 1932-33 both the autumn and the spring show of flowers were satisfactory, and further improvement in the new shrubberies could be noticed during the last year under review. The avenue of Erythrima Indica running across the upper portion of the third terrace flowered well in 1934.

The Chirāghān Melā which is held yearly in these gardens, appears to be a matter for steadily growing complaint by the Officers and the staff. The visitors to this fair leave behind them rubbish and mess which "must be seen to be believed", as one officer reports. It always entails an inordinate amount of extra work for the staff notwithstanding the assistance given by the Municipality of Baghbanpura. The *pardah* days (the first Monday of each month) do not give reason to serious complaints, although they are attended by a very large number of ladies.

Routine gardening work was carried on during all these years in the Hazuri Bagh, a small established garden in Lahore, which is becoming, unfortunately, somewhat too popular, the visitors consisting mainly of people addicted to sleeping on the lawns and leaving litter behind them to commemorate their visits. The Jor Melā held every year near these gardens produced as usual a vast accumulation of extra filth and rubbish.

Little improvement can be reported at the Shahdara gardens, excepting the planting of large beds of flowering shrubs in the plots immediately adjoining the Tomb of the Emperor Jahangir. Eight such beds have been prepared in March 1933 and planted during the season 1933-34; the result is not yet satisfactory. The general appearance of this enclosure, however, is very much improved through the repairs done to the pathways reported above.

The North-West Frontier Province. No works of any importance can be reported in this area, except repairs to the 'Conference Hall' at Jamalgarhi in the Peshawar District, which had suffered badly from the rains. A system of earthenware pipes under the floor leading to weep-holes constructed during 1932-33 will probably obviate future damage to this monument. During 1933-34

some outer walls at Jaulian have been raised to prevent visitors from climbing over them, and wire fencing was erected at several places. The rest of the ancient monuments in this Province were kept in due order.

WESTERN CIRCLE: BOMBAY PRESIDENCY AND SIND.

Mr B. L. DHAMA submitted the reports on conservation in the Western Circle for the years 1930-31 and 1931-32. In June 1932 Dr M. NAZIM took charge of the Superintendency, and his report for the subsequent year (1932-33) is utilized in the following summary. Mr M. S. VATS was Superintendent from the beginning of the year 1934, and supplied the report for the year 1933-34. All these reports have been very much abbreviated here, and only the most outstanding works are mentioned; a great deal, however, of the minor conservation activities of the Circle has been omitted with regret. Mr E. J. H. MACKAY submitted a note on conservation at Mohenjodaro, Sind, during the year 1930-31.

The greater portion of the work to be mentioned below has been executed by the Public Works Department; and we express our gratitude to the *Sivaji Jirnoddhar Committee* for having contributed two-thirds to the expenditure on the restoration work at the birth-place of Śivājī on the Shivneri Hill, Junnar.

Elephanta. The management of the caves at Elephanta had been under the dual control of the Archæological Survey and the Public Works Department up to the year 1931 when this inconvenient system was changed; since then all works are under our Department. During the year 1930-31 the preliminary work of special repairs was brought to completion. The *débris* mounds in front of Caves Nos. 3 and 4 have been excavated down to the surface of the rock, and this revealed the interesting fact that Cave No. 3 was originally intended to have two storeys; the rock underneath, it appears, proved unsuitable, and the excavation of the lower storey was abandoned. Only a shallow verandah and unfinished cells have been cut into the rock, and these have again been filled up by the Archæological Department.

Poona. Heavy rains penetrating through the bad masonry at the Shanwar Wada caused the collapse of portions of the rampart walls, first on the south side (1930), two years later on the north side (1932). These damages have been made good by the respective Superintendents, Mr DHAMA and Dr NAZIM. (Plate V, *c-d.*)

During the year 1933-34 special repairs were carried out by the Department at the seventh century Brahmanical cave temple at ***Bhamburda***, a village some two miles west of Poona City. Called variously *Pañchāleśvara* or *Pātāleśvara*, this cave temple consists of a large rectangular hall about 100×74 feet, with an open court on the east, in the centre of which stands, carved out of the same rock, a sixteen-pillared circular pavilion. (Plate VI, *b* and *c.*) The cave was evidently dedicated to Śiva (anyhow for some time) as a stone Nandi found among the *débris* in the open court proves. Until the year 1920 this cave was in the possession of private people and these have done all they could to

disfigure the walls, pillars and ceilings with repeated coats of whitewash and thick deposits of soot, unsightly iron grilles, sheds of corrugated iron and other similar additions. (Plate VI, *a*.) Mr VATS cleared the whole compound, freed the walls and ceilings from soot and whitewash, and during this process uncovered old carvings on the walls of the temple hall. The iron grilles have been eliminated and a proper shed has been erected for pilgrims, now farther off from the cave proper.[1]

Junnar: Shivneri Hill. The birthplace of Śivājī on the Shivneri Hill has always received due attention by the Department, and during the year 1930-31 a dry stone wall with an iron gate has been provided on the south side, two-thirds of the expenses having been contributed by the *Sivaji Jirnoddhar Committee*.

Monuments at and around Bijapur. A large number of special repairs have been carried out during 1930-31 and 1933-34 by the Public Works Department and the Archæological Survey in and around Bijapur. At the *Gol Gumbaz* the work of filling up the cracks in the dome was brought to completion. It is a matter of gratification that no accidents occurred during this dangerous operation to any of the workmen, thanks to the great care exercised by the Public Works Department. Further repairs were done to the *Asar Mahal* and to the *Jod Gumbaz* as well as to the *Taj Baudi*. At the last named place the clearance of *débris* has revealed the original floor of the rooms in the east portion of the building and another entrance to the well. A great deal of work had been done to the City Wall for a number of years, and this work was continued during the years under review; fallen portions have been restored, and cactus and other thick growths removed.

During the year 1933-34 a start was made to repair the damage done by the heavy rains to the *Jami' Masjid*, Bijapur; the exquisite stone work of the ancient monuments in this town is unfortunately executed in a poor quality of trap which has a tendency to crack, and some of the finely carved cornices and brackets have suffered from this disease. The Masjid is regularly used for religious service, and is a monument of great distinction and beauty; so that immediate repairs were indicated, and started during the year. Plate VI, *d* shows the work in progress on the cornice.

The *Bukhari Masjid* is a small but fine mosque of the 'Ādil Shāhī times at Bijapur. The utterly neglected and spoilt state of this nice little monument before conservation work started can be judged from fig. *a* in Plate VII. The arcades were owned by private people who gradually extended their destructive work to the very arches of the entrance of the mosque which should be inalienable parts of the shrine. After protracted legal proceedings, and payment of more than seven thousand rupees, the Department succeeded in evicting these vandals in the year 1929-30. During the year 1933-34 the clearing and restoring of the old façade have been completed, and the present state of the mosque can be seen in Plate VII, *b*.

[1] Another monument at Poona, the Maheśvara Mahādeva temple is given a special paragraph *infrà*.

Outside the town of Bijapur, two monuments received special attention during the year 1930-31 by Mr DHAMA: these are the *Sangit Mahal* and the *Nari Mahal*, both at *Navaraspur*. Fallen *débris* has been removed from the tank in front of the former, and inside the latter monument; the clearance in the Nari Mahal exposed traces of bathrooms and kitchens previously unnoticed. At *Ainapur* drains have been constructed to carry off the rainwater from the *Begam Mahal* which was menaced by the accumulation of water as its walls and floors are not watertight.

Monuments in the Ahmedabad District. In the *Annual Report* for 1929-30 reference was made to the works carried out at the *Mansar Tank at Viramgam* situated some 35 miles from Ahmedabad.[1] This work was brought to completion during the year 1930-31 when another 100 feet of the wall (which measures about 3,500 feet in total) have been repaired on the north and south sides.

Ranpur, situated about 60 miles south-west of Ahmedabad, possesses some interesting historical monuments, prominent among which is *Azam Khan's Castle* (or *Palace*) built by A'zam Khān, the 23rd Viceroy (1635-42). (There is a Palace in Ahmedabad itself the foundation of which is also ascribed to the same A'zam Khān). The Ranpur Castle is a picturesque structure in a very ruined condition, with some interesting remains inside the crenellated and turretted walls. The late Mr R. D. BANERJI had submitted a conservation note in 1919 but the monument was not brought onto the list of Central Protected Monuments before 1929 for certain reasons. The clearing of *débris* was immediately started in that year, and during the year under review (1930-31) a great deal of further clearance work was carried out in order to ascertain the nature and extent of the old structures.

The *Tombs of Qutb-i Alam and his sons at Vatwa*, and the mosque attached to these tombs, have been built in the reign of Mahmūd (I) Begarha, the sixth king of the Ahmad Shāhī dynasty of Gujarat (1458-1511). These monuments were declared protected in the year 1909, and repairs have been carried out during a number of years. Work was held up for some time because of certain bogus claims of ownership, although the monuments are undoubtedly Government property. Repairs were recommenced during 1930-31 when fallen portions of the compound walls have been restored, floors and leaking roofs having been treated with concrete.[2]

Monuments in the Ancient City of Champaner. The sums allotted for repair works in this area have always been so limited that the annual conservation carried out was constantly insufficient, although such works were done every year for many years past. During the year 1930-31 attention was given to the Kevada Masjid, the Lila Gumbaz, the Nagina Masjid, the Citadel wall, the Panch Mahudaki Masjid, the gates on the Pavagadh Hill *etc.*; during the year 1931-32: the Jami' Masjid, the Kevada Masjid, Citadel wall, the Godhra and Kasbin Talao gateways, the Sat Manzil and the Makai Kothar. Stone and *débris* have been removed from the covered underground passage in front of

[1] *Loc. cit*, pp. 28-29.

[2] Another monument in the Ahmedabad District is the Malav Tank which is given a special paragraph *infrā* on account of its importance.

the Lila Gumbaz discovered during 1929-30 but the exact nature of this structure could not be determined. The platform and the steps have been thoroughly repaired. (Plate VII, *c* and *d*.) In the same year, 1930-31, the clearance work around the south side of the Citadel wall was continued, and more Maratha period dwellings uncovered. The excavation yielded some minor objects of interest, such as implements of iron, terracotta lamps, conch shells *etc.*

During the following year, 1931-32, the Jami' Masjid and the Kevada Masjid received special attention; displaced or missing steps have been reset or restored; plinths buried under several feet of earth have been uncovered; open joints have been filled and roofs made watertight; and missing pilasters have been restored.

The Malav Tank at Dholka, Ahmedabad District. This impressive and fine monument was built by Mainal Devi, the Queen Regent and mother of Siddharājā Jayasiṃha Deva in 1115 A.D. and is the chief source of water supply to the inhabitants of Dholka. An agreement was reached with that Municipality during the year 1931, and conservation work was taken in hand and continued during 1932-33. Tanks are common in India, yet those in Gujarat have a special claim to beauty, large size and practical design. Usually the platform from which steps descend to the water carry miniature shrines with pyramidal roofs, and a circular silting well is joined with an inlet sluice to admit clear water into the main tank, and, as a rule, larger size shrines are found on the other sides. The Malav Tank in addition to these features has also in its centre a temple of which only the *maṇḍapa* is preserved now, and which is connected by a causeway with the east ramp. The other shrines have all disappeared. The repairs to this interesting monument have been carried out by the Archæological Department according to a conservation note prepared by Mr G. C. CHANDRA in 1930. Silt has been cleared from the platform and steps; the fallen portions of the retaining wall and side-walls of the inlet channel have been rebuilt (Plate VIII, *a* and *b*), and *débris* has been removed for a width of some thirty feet all round the tank. Unfortunately, this clearance has revealed that there is much more conservation work in store here than originally estimated, but lack of funds and unsatisfactory work on the part of a contractor prevented the Department from continuing work after 1932.

The Jogeśvarī Caves in the Bombay Suburban District. Reference has been made in the former report[1] of this Department to this cave and the urgent need to restore its missing pillars. During the year 1931-32 six pillars have been restored strictly in style and only two more pillars and pilasters are needed to complete the whole set. (Plate VIII, *c* and *d*.)

Ratnagiri District. The Fort at Vijayadurg has received special attention by the Superintendent for the last few years. During 1930-31 the most important repairs were brought to completion, and only minor ones have been left to wait for better times. Four bastions (Nos. 7, 8, 9 and 10) have been

[1] See *Annual Report* for 1929-30, pp. 21-22.

thoroughly restored, and the wall between bastions 9 and 10 on the seaside has been completed.

At the small port town of *Dabhol* in this District stands a small but fine *masjid* in the Bijapur style, built (according to an old document in possession of its *mutawallī*) in A.H. 1070 (*i.e.* 1659-60 A.D.) by a Bijapur princess, 'Aishā Bībī, daughter of Sultan Muḥammad Shāh, the founder of the famous Gol Gumbaz at Bijapur. During the 16th and 17th centuries Dabhol was the port of embarkation of the Muslims of the Deccan towards the Hedjaz pilgrimage, and was then a far more important place than now. It was here that Yūsuf, the founder of the 'Ādil Shāhī dynasty of Bijapur, first landed from Iran[1] as a slave to be sold by his merchant master at the Bahmanī Court of Bidar. Princess 'Aishā Bībī came here on her way to Mecca and was held up for a long time as the sea was infested by pirates. Before abandoning the pilgrimage, the Princess spent all the money reserved for the journey on the construction of this little *masjid* at Dabhol.

During the year 1933-34 all open joints in the stone pavement of the court, the cracks and depressions in the dome and the terrace of the prayer hall have been treated with cement; the top of the parapet wall as well as the terraced roofs of the *dālāns* and entrance gateway on the left have been relaid in lime concrete, and a number of minor repairs were carried out, including drainage arrangements.

The Maheśvara Mahadeva Temple at Fulgaon, Poona District. Mr PAGE drafted a conservation note on this ruined temple in 1914, but no special repairs were carried out, excepting the annual maintenance and clearing of vegetation. During 1930-31 some of Mr PAGE's recommendations were followed and the roof of the structure has been made watertight, wire netting provided in the *śikhara*, paint and marks have been removed from the pillars and walls, the modern mud walls have been dismantled, and the site has been cleared.

The Buddhist Caves at Bedsa, Poona District. These first century caves in the Supati Hills, Western Ghats, underwent special repairs during the year 1933-34, during Mr VATS' Superintendency. The open court in front of the caves has been levelled and sloped towards the valley in order to divert water from the caves. The walls of the *chaitya* hall have been freed from whitewash, the modern plaster has been removed from the side walls of the *vihāras*, the rock-cut gutter on the top of the caves deepened, and the water tanks in the cave area have been freed from silt deposit.

The Old Castle, and the Tomb of Khwaja Safar Salmani at Surat. These two monuments received special attention during the year 1933-34. The ramparts of the Old Castle have been thoroughly repaired with fresh cement plaster stained to match the masonry. The other monument is the tomb of a Turk,

[1] In compliance with the request of His Majesty Rezah Shah's Government, Persia will be called in this publication Iran, except where reference is made to *ancient Persia* in contradistinction to ancient Iran. It may be allowed to remark here that it is certainly true that *Persia* is a misnomer for the present country, as the name really denotes one province of that country only (Fārs, *i.e.*, *Persis* of the ancients); but it is equally untrue to call the present country *Irān*; for that expression should include the whole of present Afghanistan, Seistan and portions of Russian Turkistan as well, all known to the ancients as *Ariana*, *i.e.* *Irān*, and now under separate political administrations.—*Editor.*

Khwaja Safar Salmani, who came to India about 1529 A.D., took service under the Sultans of Gujarat, and ultimately rose to the Governorship of the Surat Province in 1540. The Portuguese were trying to force their way into Surat, and Khwaja Safar Salmani had to defend his province. He built the Old Castle, referred to above, in 1542, and met his death four years later while besieged by the Portuguese at Diu. He was buried in Surat, and his tomb was declared a protected monument in 1929. It is a square domed building, with smaller domes at the cardinal points around the central one, and surrounded by a verandah. (Plate IX, *a*.) It is a very harmonious and interesting monument, deserving thorough conservation. During the year under report the tomb and its precincts have been freed from rank vegetation and *débris* as well as modern additions in mud, brick and wood. The pavement of the verandah has been entirely relaid with lime concrete, cracks have been treated with cement grout, the hanging *chhajjā* on the west side has been supported with a new wooden beam similar to the original one. All the windows in the tomb chamber have been provided with expanded metal panels to keep out bats and birds, and eleven unsightly graves in the north verandah of the tomb have been repaired with *lakhaurī* bricks in lime mortar.

Monuments in Sind. A portion of the dome of Mirza Isa Khan's Tomb at *Tatta* collapsed during the rains of 1932 and conservation was carried out in 1932-33 and the subsequent year. The platform walls of the Buddhist *stūpa* at *Gaja*, District Hyderabad, also suffered from the rains, and have been reconstructed during 1933-34. Special repairs have been carried out on *Ghulam Nabi Kalhora's Tomb*, at *Hyderabad*. This monument is one in a group of the tombs of deceased members of the Kalhora and Talpur dynasties situated to the north of the town; they are fine monuments, once profusely decorated with coloured tiles in geometric and floral patterns, but unfortunately many of these tiles have now disappeared. Ghulam Nabi Khan (A.D. 1777) was the sixth ruler of the Kalhora dynasty, and his tomb was given special attention by Mr DHAMA during 1930-31. The existing tile-work has been conserved as far as possible, and it is hoped that similar conservation can be carried out to the other tombs at no distant date.

Conservation work at Mohenjo-daro, Sind. In a brief note submitted by Mr E. J. H. MACKAY, Special Officer for Exploration, mention is made of the fact that the mud mortar used by the ancient inhabitants of Mohenjo-daro amply served its purpose as long as it was free from salt; but now that the buildings are exposed to the air, the salt is having its way, and the mortar is ceasing to serve its purpose. Consequently, two masons and six labourers have been at work during 1930-31 repairing the masonry and resetting where necessary. Visitors to the site cannot avoid walking along the walls if they want to see more than the mere outside walls of the houses, and some damage has been done here and there unintentionally, and this will happen in the future too. It will be, therefore, necessary to keep an eye on all the sites during each year and make provision to preserve them in good condition.

CENTRAL CIRCLE: BIHAR AND ORISSA; THE CENTRAL PROVINCES; AND BERAR.

Mr M. H. KURAISHI was Officiating Superintendent from February 1931 until September 1932, and submitted two reports dealing with the years 1930-31 and 1931-32 which are the basis of the following *résumé*. Mr G. C. CHANDRA was appointed Superintendent of the circle from the 19th September 1932. and carried out the works and reported on conservation for the two subsequent years, *i.e.*, 1932-33 and 1933-34. The important conservation works at Nālandā, Bihar Sharif, Rajgir, Maner and Patna were carried out by the Archæological Department, under the supervision of the officers concerned, the rest of the repairs were done with the co-operation of the Public Works Department. It is regretted that the reports have had to be curtailed considerably so that only a small portion of the activities of these officers could be dealt with. Thanks are due to the Local Government for their generous contribution towards the conservation work at Rohtasgarh, Shahabad District, Bihar, half of the total expenditure on which (Rs. 22,770) has been defrayed by them.

Conservation at the Site of Nālandā. During the four years under report a great deal of conservation and restoration was carried out at this large site, and only the most important items can be mentioned here. The reader should bear in mind, however, that a considerable amount of repairs to walls, floors and pathways has been done each year besides the works mentioned in the present summary.

The walls of the courtyard of *Monastery Site No. 8*, excavated during 1929-30, have been thoroughly restored in the years 1930-31 and 1931-32. This required a great deal of dismantling and rebuilding of the cell walls, which have been given now a solid core of brick and a uniform height of about eight to ten feet. The restoration has, naturally, followed strictly the original plan. The main entrance of this monastery which had almost completely disappeared, has also been restored, as well as the exterior wall. (Plate IX, *b*.) In the east half of this court is a subsidiary shrine measuring 50′×35′ including the later additions: the fallen portions of this structure, the flight of steps giving access to it from a large, low platform, and the platform itself, have been restored and relaid with fresh concrete wherever necessary.

The lintel doorway of a cell in the south-east corner,—the only one preserved right up to its original height in this monastery,—has been repaired during the year 1931-32. The original wooden lintels having disappeared, three fresh concrete lintels have been inserted to support the superstructure which is decorated with an ornamental dentil cornice. This treatment of a door opening is unique at Nālandā.

Repairs to the *Shrine north of Monastery No. 18* were carried out during the same year 1930-31. The concrete stairs which were in a very damaged condition have been repaired with fresh concrete to match the old work; the walls have been rebuilt wherever fallen and made watertight, and drains have been provided. Existing indications of the two levels of occupation have been carefully preserved during these repairs.

A retaining wall of concrete, 7′ high and 84′ long, has been constructed against the cut face of the high ground to the north of *Monasteries 1A and 1B.* This wall has been kept uneven and rough on the face so as to give it the appearance of ancient *débris.* It will put a stop to the damage caused by the rains from year to year, and will also protect a later building close by from impending danger.

Further conservation work during 1930-31 at the *Stūpa Site no. 3* consisted of repairs and underpinning to the exterior west face of the wall that rises from the level of the sixth *stūpa* stair on the north front of the Main Stūpa; waterproofing the tops of two of the votive stūpas to the south-west of the Main Stūpa and provision of easy drainage of rainwater at the last two monuments.

About one *lakh* of bricks of the Gupta size have been made for the purpose of conservation work by Mr H. Kuraishi who carried out most of the above mentioned repairs.

During the year 1931-32 the bulk of the conservation work carried out by the same Superintendent related to *Monastery no. 7.* There are here three structures built one above the other, and of the same size. The topmost structure, including its sanctum and entrance, has been maintained in the north half of the site only; the south half has been divided into two sections, the central section representing the second level, and the southernmost, or lowest one, showing the state of the earliest (pre-Devapāla) stratum. The courtyard of the uppermost level is paved with concrete; the earliest stratum is paved with large size bricks. When these structures had been exposed a few years ago, the verandah parapet wall around the courtyard of the latest (topmost) level was found missing, the bricks having been taken away, evidently, by villagers of old times. Mr H. Kuraishi, however, succeeded in finding, at a depth of about six feet, the foundations of this parapet wall, and reconstructed it to its original height which he was able to ascertain from traces of concrete left in one or two places at the corners. It was unfortunately impossible to find out the position of the column bases on the top of the parapet wall. The damaged platform in front of the sanctum in the middle of the east row of the monastery cells has been carefully repaired in the north half in accordance with existing indications, and a small drain was provided with a slope towards the courtyard.

It was originally intended to preserve the second level courtyard (about six feet below the uppermost one) along the whole length of the monastery court; but the discovery of a shrine in the east half, which has yet to be excavated, led to its division into two parts, a passage having been left to allow easy access to the excavation of the shrine. (Plate IX, *c* and *d.* The shrine is seen in middle distance, on the second level.) The original brick pavement of the oldest, third level, was also in a very bad state of preservation. Whilst the uppermost courtyard has been treated with brick concrete and lime, the second one received a concrete edge only, and the third, lowermost courtyard has been repaved wherever necessary with fresh bricks in keeping with the old pattern. About the middle of this earliest court, nearer to the east, were discovered remains of a couple of so-called 'ovens' or *chūlhās, i.e.*, small pits, 7′ 2″ long, 1′ wide and

1′ deep, with a brick or two laid across them. Mr H. KURAISHI suggests that these holes were not cooking places, but were used for dyeing the Buddhist monks' robes in the well-known saffron coloured dye. (Plate IX, *d*, lowest stratum, towards the middle distance.)

Notices indicating the way to portions of the site have been posted at appropriate places: an entrance fee of two annas was levied from adult visitors, and one anna from children under 12 years, from the year 1931 onwards. A *Guide to Nālandā* has been published by the Department and is obtainable at the popular price of 12 annas.

During the years 1932-33 and 1933-34, Mr G. C. CHANDRA executed important special repairs to a number of structures, foremost among which are the shrines of *Chaitya Site no. 12*. (Plate X, figs. *a, c* and *d*.)[1]

In 1932-33 repairs were carried out to the four shrines situated in the four corners of the Chaitya Site no. 12 at the upper level (Plate X, *a*); to the detached shrines on either side of the Chaitya containing the colossal stucco images (now badly damaged); to the small shrine standing on the north side of the Chaitya, and to the south-east corner of the Chaitya itself. Due care was paid to following strictly the original style. Besides the above, attention has been paid also to the two groups of votive *stūpas* standing at the south-east corner of the Chaitya Site no. 12 (Plate X, *a*), which has been repaired with bricks made specially for the purpose.

During 1933-34, the parapet wall enclosing the *pradakshina* (circumambulatory passage), which was in a bad state of preservation, has been rebuilt almost entirely, as large portions had to be taken down. The original bricks have been used again while re-erecting the new wall, and the uneven height of the original parapet wall has also been maintained, as it appeared that ancient repairs were responsible for this unevenness. It seems that the people of those days rebuilt the wall every time it collapsed, and portions of the parapet became in this way higher or lower than the rest. The top of the new wall has been made watertight, and due provision has been made for rainwater drainage. (Plate X, figs. *c* and *d*.)

The external walls of the main shrine of the Chaitya at the upper level have been secured during the same year. A great deal of dismantling was necessary before rebuilding, and the greatest possible care has been exercized in restoring the pilasters, arches, mouldings *etc.* in the niches of the walls. The tops of the walls have been made watertight with concrete, beneath a rough hearting, as usual, and overlaid with finely screened earth.

Special conservation work was also carried out by Mr CHANDRA at Monastery 10, where the entrance gate, and the external walls of the cells in the west row needed urgent repairing. These works were carried out with great circumspection, and with strict adherence to the original plan of the structures. *Monastery no. 9* is also in urgent need of repairs, and the Superintendent has already restored the entrance gate during 1933-34. This gate was in a very bad state of preservation and had to be rebuilt almost from the very foundation.

[1] For a detailed description of this site, see Section Exploration, under 'Excavations at Nālandā', and the plates illustrating that chapter.

It is impossible to report here all the minor repairs carried out at this large site. There was a great deal of jungle clearance during all these years; drains which are so very important for the further preservation of the site, have been provided at a large number of places; damaged floors have been restored and relaid in concrete (*e.g.* Monasteries no. 1A and 1B, Monastery no. 7, Chaitya Site no. 12 *etc.*); pathways have been constructed; walls have been underpinned and restored, and many similar works carried out with all the care needful at a site of such importance.

Readers will regret to hear that the great Indian earthquake of January 15th, 1934, has caused no inconsiderable damage to the site under review. Most of the structures suffered only slightly, but great havoc was caused at *Stūpa Site no. 3*, where major portions of the east façade of the 4th level stūpa collapsed entirely, whilst other portions were so badly affected that the walls had to be demolished and the materials removed. They will be used for further conservation work.

Rajgir. This site, the ancient *Rājagriha* or *Rājagaha* where the Buddha spent such an important part of his life, is becoming every year more popular with Buddhist pilgrims from Burma, Ceylon, Tibet *etc.* This popularity has a regrettable side, as some of the devoted pilgrims do not restrain themselves from displaying their religious zeal in the objectionable manner of inscribing their names and other legends on the walls of the caves and structures. This naturally involves extra work and expenditure, for the inscriptions have to be removed. For the convenience of visitors to this sacred place, the pathways in the valley have been improved during the years under review, much of the jungle growth having been removed; repairs have been done among others to the famous ancient road of King Bimbisāra leading up to the caves on the *Gṛidhrakūṭa* Hill. (Plate XII, *a.*) While clearing these caves during 1931-32, Mr H. Kuraishi found a few shellac seals bearing a figure of the Buddha in the centre with numerous *stūpas* represented around him, and with an inscription in medieval characters underneath. In the following year a small seated stone figure of the Buddha was discovered in one of the caves.

The *Maniyar Maṭha*, which is an interesting monument with a large drum somewhere in the centre and attaching structures around it, received the attention of the Superintendent, Mr Chandra, during the last two years under report. (Plate X, *b.*) Three different strata can now be discerned, but further excavation and conservation work is needed and may reveal more layers of earlier buildings. So far the work of these two years succeeded in ascertaining three different staircases, and repairing the central drum-shaped structure as far as feasible.

A number of minor objects have been discovered during these operations, a brief list of which is given here.

(1) Sculptured Mathurā sandstone fragment, 2′ 3″×1′ 5½″; eight male figures on one side with snake-hooded umbrellas; reverse: three standing male figures. Inscription in Brāhmī characters of the 3rd century A.D., fragmentary.

(2) Fragmentary stone sculpture, height 19¼″, showing lower portion of Vishṇu on lotus throne; on the left side of the god stands a male attendant with *chamara* (fly-whisk); devotee kneeling at right corner of pedestal.

(3) Fragmentary image in red stone, with Brāhmī inscription of the second century A.D. or earlier, reading: (L. 1) *pa(r)vato vipula* (L. 2) *rāja-ganikā*. In connexion with the name of "The Hill Vipula" it may be remembered that Mahāvīra when at Rājagaha put up at Mount Vipulachala where he met the King of Rājagaha, Rājā Śreṇika. It is probable that the inscription under discussion refers to that incident, and *ga* is erroneously written instead of the *śre*.

(4) Embossed terracotta piece with two sealings of one type (dia. 1¾") showing male figure, holding *triśūla*, seated on bird; below: indistinct inscription in Gupta characters.

(5) Red stone image, c. 3' high, of male figure seated on pedestal with sword in left hand. and *Kīrti-mukha* on head.

(6) Two stone heads and a torso, probably of Jaina mendicants, and a number of pottery fragments, mostly a kind of ribbed ware, were also among the finds of 1933-34.

Excavation and conservation work has been carried out during 1932-34 on the *Digambara Jaina Temple* situated on the *Vaibhara Hill*. (Plate XI, figs. *a* and *b*.) The nature and extent of this ruined building have now been fully established and brought to view. The temple measures 63′ 10″ by 56′ 9″, and 24 small shrines have been found surrounding the central one. and containing various Digambara Jaina images with inscriptions. Among the minor finds was an image. 22″ high, carved in stone, showing a standing figure with both arms hanging straight down to the hips: the figure stands in a kind of niche. the upper portion of which is decorated with a *chaitya* window: there are two more figures placed in niches above the central figure, seated in the *dhyāna* pose.

Repair works have been carried out at the *Sonbhandar Cave* during the year 1933-34 and the clearance of *débris* resulted in the *discovery of another cave* adjoining it. The roof of the Sonbhandar Cave was leaking, and has been now provided with a new concrete terraced roof with a parapet wall facing east. (Plate XI, *c*.) The freshly unearthed cave to the north of it is in a ruined condition: it can be, however, ascertained that it was about 40 feet in length and smaller than its neighbour: there was originally a verandah, 38′ 9″ in length and 9 feet in width, the walls of which were constructed in brick; the door opening of the verandah measures 11′ 3″, whilst the cave entrance is 3′ wide. The cave was evidently two-storied. as there are traces on the top of the cave which suggest an upper structure. There are inscriptions in Brāhmī and Shell characters on the outer wall of the cave (Plate XI, *d*) which have not yet been deciphered, but Mr CHANDRA believes that one text contains the name of a Vaishṇava devotee. This seems not unlikely in view of the fact that an image of Vishṇu on Garuḍa has been discovered among the *débris* fallen from above the entrance door. (Plate XII, *b*.) This sculpture measures 3′ 6″ by 3′ 2″, and is, unfortunately, damaged; its occurrence however, at such an important place justifies the conclusion that the cave belonged to the Vaishṇavas, probably in the 2nd or 3rd century A.D.[1]

[1] This date is suggested by Mr CHANDRA. A glance, however, at plate XII, *b*, is enough to ascribe this magnificent sculptured slab to the Gupta period, more precisely, to the end of the 5th or the beginning of the 6th century A.D. Indeed, to the Editor this *alto-relievo* seems to represent the Gupta school at its best: the figure of Vishṇu is boldly drawn, whilst the Garuḍa below, in a baroque twisting of head and body, shows the subtlety and almost feminine sensitivity of the Gupta style. The elaborate head-dress of Vishṇu, and the highly conventionalized hair-curls of the Garuda. the flat treatment of the belt, the beautiful, and for India rare form of the wings, are among the many characteristically Gupta features of this relievo.—*Editor.*

The Juma' Masjid at Hadaf, Rajmahal, Santal Parganas. Special repairs have been carried out to this interesting monument built by Rājā Rām Singh, Governor of Bengal. During the years 1930-31, 1932-33 and 1933-34, a great deal of clearance and underpinning has been done, after which gaps and cracks have been filled with cement, and the side walls of the tank as well as of the ruined enclosure walls have been repaired with brick.

Rohtasgarh, District Shahabad, Bihar. As mentioned above, the Local Government have generously contributed half of the expenses on conservation work at this place; and a great deal of repair has been done to the Khunt Mahal, the Zenana Palace, the Shish Mahal, the Rang Mahal, the Tomb of Saqi Sultan, the Mahadeo Temple *etc.*, most of the repairs being of a petty nature, except the first two monuments where the dilapidated, picturesque oriel balconies have been thoroughly restored.

Kesariya: Champaran District. During the years 1930-31 and 1931-32 special repairs have been carried out for the protection of the base of the Buddhist *stūpa* at Kesariya. Bricks of a special size have been manufactured on the spot for this purpose. During the year 1932-33 it was decided to purchase lands measuring 8·32 acres (at a cost of Rs. 2,161) in order to ascertain the nature and extent of these ruins. The name of the village is Tajpur-Deur, Majhawa *pargana*, and the *stūpa* is locally known as Deur.

Maner: Patna District. Conservation work at this place during 1931-32 consisted in repairs to the main gate of the *Mausoleum of Shah Daulat* and the basement walls of the pavilions of the tank situated between that monument and the Inspection Bungalow. During the subsequent two years special attention has been paid to the *Tomb of Makhdum Shah.* The cracks in the dome have been thoroughly repaired and the stones of the soffit treated with liquid paraffin as recommended by the Archæological Chemist; an iron frame with wire netting has been fixed inside the dome.

Palamau: the Naya and Purana Qil'a. These two hill forts were the original seats of the Chero Chiefs, and were entirely hidden under a thick jungle growth when conservation work was taken in hand by the Superintendent during the year 1932-33. After thoroughly clearing this vegetation from around the walls of the Naya Qil'a, Mr CHANDRA found two inscribed door-jambs at one of the three entrance gates. (Plate XII, *c.*) One of these inscriptions is in Sanskrit, the other one in Persian, and they record the erection of the Nāgpurī Gate of the Naya Qil'a by Medinī Rāi, a valiant general of the early 17th century. Further clearance work revealed a number of moulded stones in Mughal style. The appearance of this monument is now greatly improved, and visitors, who are coming in large numbers, are warned against doing any damage by notice boards which have been provided at the site.

The Buddhist Caves of the Barabar Hills, Bihar. These famous seven caves have not received the attention of the Department for some years, and rainwater used to collect in the two ancient caves called *Sudāma* and *Lomaśa Ṛishi* during a considerable part of the year. The façade of the latter cave was, moreover, blocked in a manner which made it impossible to take any good

photograph of the entrance and it was necessary to remove the accumulation of stone and *débris* before any other work was taken in hand. Proper drainage has now been provided, and the area of these important monuments of the third century B.C. (or earlier) has been thoroughly cleared. (Plate XII, figs. *d* and *e*).

Conservation Work in the Central Provinces and Berar. A large number of monuments received the regular attention of the Superintendents in charge, and many petty repairs have been carried out during the four years under report which cannot be enumerated in detail. Major conservation work included the repairs to the *Ānandeśvara Temple, Lasur,* in the Amraoti District; here defective stone work on the *śikhara* done previously by the Public Works Department has been replaced by a fresh and accurate imitation of the original; cracks have been filled, bad lime pointing removed, the growth of rank vegetation checked; a pillar has been removed and replaced beneath the cracked lintel over the opening of the east sanctum, and the whole surroundings of the temple cleared and properly levelled. This was done in 1930-31.

During February 1930 the central portion of a bastion of the lower ramparts of the *Fort at Balapur,* District Akola, Berar, collapsed suddenly. It was found necessary to reconstruct the fallen bastion entirely, and this work was finished during 1930-31, well below the estimated cost.

Repairs have also been carried out at the *Mahādeva Temple at Kodal,* Damoh District, Central Provinces, where the exterior facing of the north wall has been reconstructed in plain ashlar masonry; gaps, cracks and disturbed stones in the *śikhara,* the roof and the walls have been thoroughly repaired and made watertight; the floor and steps in front of the shrine have been made good; the *maṭha* as well as the grounds of the temple have been cleared of rubbish and *débris,* and the approach steps and the basement plinth on which the temple stands have been duly reconstructed.

The same year the colossal *monolithic images* representing the *avatāras* of Vishṇu at *Lalpeth,* Chanda District, received the attention of Mr H. KURAISHI. Suitable bases and supports have been provided, and the pointing coloured to harmonize with the dark tone of the sculpture.

During the year 1931-32, rank growth has been removed from the *Gond Fort at Deogarh,* Chhindwara District, cracks and crevices have been grouted with cement, and cracked arches supported by masonry pillars where necessary; wicket gates have been fixed at the entrances to the Fort, and numerous minor repairs have been executed to plaster-work and masonry. The work was completed during the next year.

A great deal of masonry repair was done in 1931-32 to the *Mahādeva Temple at Dhotra,* Buldana District, Berar. The missing ornamental plinth stones around the Nandi in front of the temple have been replaced by new ones. the cracks in the depressions of the ornamental masonry of the superstructure have been filled with cement concrete, and the roof of the main temple which leaked badly during the rains, has been made thoroughly leak-proof. Finally, the compound was cleared of wild growth and rubbish.

During the year 1932-33 many repairs were done to a number of forts; substantial amounts from conservation funds were spent at *Narnalla Fort*, District Akola. the Fort walls at *Chanda*, District Chanda. the *Gawilgarh Fort, Chikalda*, District Amraoti, the *Asirgarh Fort*, District Nimar, the *Gond Fort, Mandla,* in Mandla District, the old *Mughal Fort* at *Joga*, Hoshangabad District, *etc.* Special repairs have been carried out at the Hawākhāna Bastion of the *Akola Fort,* where a portion of the bastion at the north side collapsed during the rains. The people of the locality used to scoop out and take away earth from the base of this important bastion, but this dangerous and unauthorized practice has now been stopped by the Public Works Department.

During the last year under report hardly any special repairs could be done, in view of the very much depleted purse at the disposal of the Superintendent of this circle, who had to provide for ordinary maintenance repairs to no less than 152 ancient monuments. The only work of importance occurred at the *Fort of Wairagarh* in the village of the same name. This structure is believed to have been built by the Gonds during the 17th century A.D. The rampart walls are about a mile long, and are provided with rectangular bastions all round, excepting one bastion in the south-east corner which is circular in shape. The whole of these walls, as well as the inside of the Fort, were thickly overgrown with trees, bushes and thorny plants which made a survey or inspection hardly possible. During the year under report, 1933-34, this jungle has been completely cut down and removed.

The dangerously overhanging walls of the main entrance gateway to the compound of the *ruined temple at Sheorinarayan*, Bilaspur District, have been dismantled; and special repairs have been done to the gateways of the ancient city wall of the *Khimlassa Fort* in the Saugor District.

EASTERN CIRCLE : BENGAL AND ASSAM.

Mr G. C. CHANDRA submitted the reports for the years 1930-31 and 1931-32 for the Eastern Circle, comprising Bengal and Assam. During 1932 the post of Superintendent, Eastern Circle, Archæological Survey of India, has been abolished, and the work in that Circle handed over to the Superintendent, Archæological Section, Indian Museum, Calcutta: a post which was formerly a separate one. Mr K. N. DIKSHIT took charge on August 31st, 1932, both of the Archæological Section, Indian Museum, and of the Eastern Circle, and the two last reports under review, for the years 1932-33 and 1933-34, are from his hand.

As will be seen from the text to follow, the serious cuts in grants for Conservation have handicapped the officers in no small degree. Conservation of major proportion could not be carried out except at two or three places, Paharpur and Tribeni having been amongst the most important during all the four years. A large number of petty repairs, carried out by the officers in charge, including difficult work after the disastrous earthquake of January 15th, 1934, can not be enumerated in detail. It should be borne in mind, that the work of two officers is now discharged by one Superintendent.

The Monuments at Paharpur, District Rajshahi, Bengal. During the year 1929-30 the Main Temple at this large site has been properly renovated, as reported in the *Annual Report* for that year. Further conservation work was proceeded with during all the four years under review, and a short summary only can be given here of the works carried out.[1]

During 1930-31 special care has been bestowed on preserving the smaller structures which came to light in the extensive courtyard between the Main Temple and the great monastic quadrangle around it. Among the structures preserved here are what look like pedestals for images, and another structure which appears to be a miniature replica of the Main Temple of this site. The southern half of the exterior wall of the eastern wing of the monastery was rebuilt with the original material; and repairs have been carried out to the side walls of the "wicket gate" on the north side of the monastery which had subsided and been cracked by the earthquake and consequent upon the working of rainwater. An unfinished structure in front of the continuous verandah of the monastery, to the south of the wicket gate mentioned above, also received attention. The walls, which were out of the horizontal, have been rebuilt with the original material, and the terracotta plaques that had become looss have been refixed in their probable positions; the mouldings of the cornice below them have been relaid in accordance with photographs taken immediately after excavation.

During 1931-32 further attention was paid to the outer walls at the south-east, north-east and north-west corners, which have been rebuilt with old bricks and in conformity with the details of the existing portions. The two flights of steps, one to the east side of the monastery, the other to the north of the Main Temple have been repaired, and the two periods of construction, dating from pre-Pāla and Pāla times, have been carefully indicated. (Plate XIII, *a* and *b*). Terracotta plaques found during the excavation, and not in position on the walls, are now arranged in a godown on shelves for the inspection of visitors.

Mr DIKSHIT's conservation work during 1932-33 related mainly to the rebuilding of the walls of the *maṇḍapa* and antechamber to the east of the Main Temple. In the courtyard around the Main Temple the ornamental brick-work of the pedestals in the western and southern cloisters has also been repaired and partly restored. The complexity of the task will be apparent from the fact that *e.g.* in the eleven vertical sections and 14 horizontal layers making up the façade of one single pedestal (Plate XIII, *d*) no two bricks are identical in shape and size. In the area between the southern cloisters and the Main Temple five votive *stūpas* with elaborate mouldings on one and the same platform have been carefully reconstructed. (Plate XIII, *c*). The stone sculptures inset into the lower part of the basement of the Main Temple remain, unfortunately, under water for over six months in the year; they have been examined by the Assistant Archæological Chemist for the presence of injurious salts, and have been treated on the spot according to his instructions. While

[1] Readers are referred to the Exploration Section where a detailed account will be found of the excavation (now completed) of this site, with a site-plan and illustrations.

removing these slabs from their original position an excellent opportunity was offered to examine the method of their insertion. It appears that these reliefs had already been used before being utilized in the present structure, and that they must consequently antedate the Main Temple. If, therefore, these sculptures can be assigned to the 6th-7th century A.D. according to Mr DIKSHIT, the present Main Temple must be assigned to a later date. Thus the part of a sculptured *kīrtimukha* with lotus-and-vase below (Plate XII, *f*) he ascribes to the 7th century; and this sculpture has been partially defaced at a later time when a new face has been fashioned on the stone representing 'two boys pulling a man'. The figure of Kubera seated in a niche (Plate XII, *g*) found on the back of an image, he also ascribes to the same period. Mr DIKSHIT therefore assumes that the Main Temple in its latest shape must date from the middle of the 8th century, *i.e.*, the time of King Dharmapāla.[1]

Further conservation work was done during 1933-34 to the Main Temple; the walls of the antechambers and the *maṇḍapas* (pillared halls) at the cardinal points have been thoroughly repaired with the old material and lime and cement mortar. The outer facing of the north wall of the western hall has been renovated, and all the walls of the northern antechamber and the western wall of the northern *maṇḍapa* have been entirely repaired. (Plate XV, *a*). Two shrines in the southern cloisters (Plate XIV, *a*), and two in the western one, all with highly ornamented brick-work, have been restored.

Tribeni, District Hooghly. Conservation work, started a few years ago, was continued during the years under review on the *Tomb of Zafar Khan Ghazi* at Tribeni, one of the oldest Muslim monuments in Lower Bengal (13th to 14th century A.D.).[2] The eastern portion of the tomb was formerly the *maṇḍapa* of an earlier Kṛishṇa temple which stood on the same spot, and sculptures on the inner walls represent scenes from the *Rāmāyaṇa* and the *Mahābhārata*, with descriptive titles inscribed in proto-Bengali characters. During the years 1930-31 and 1931-32 a number of sculptures have been exposed during the clearing of the plinth of the tomb. (Plate XV, *b* and *c*). The series of sculptured slabs shown in plate XV, fig. *b* represent scenes from the *Mahābhārata* with usually one of the famous heroes in a compartment surrounded by a decorative garland, the names of the personages being inscribed above the panels (Duryodhana, Bhima, Arjuna *etc.*). The other frieze, illustrated in plate XV, *c*, shows Vishṇu with Lakshmī and Sarasvatī in the centre, with two attendants, and five *avatāras* of Vishṇu on both flanks. Other lintels discovered during clearance work show animals (boars, horses, elephants, cows), and the *kīrtimukha* is a favourite decorative device. Conservation work included the

[1] Cp. *Annual Bibliography of Indian Archæology for the year 1932*, pp. 26-31, by C. L. FÁBRI: "With the scanty material at our disposal it is rather difficult to form an opinion, but, as far as we can see, among the published sculptures there certainly is not a single one that could possibly be as old as the 6th century. It is much more likely that the stone reliefs belong to a 'provincial school' of sculpture of the 7th to 10th century, and the terracotta panels to a period no tbefore the 10th century A.D."—As inscriptions found at Paharpur range from the 5th to the 11th century, it seems to us most likely that the latest shape of the Main Temple must be ascribed to the 11th century and not three hundred years earlier.—It will be seen in the Exploration Section that a similar date is accepted by Mr DIKSHIT; it is, however, his impression that the *main features* of the Temple remained unchanged after the 9th century: a very acceptable conclusion.—*Editor.*

[2] Sir John MARSHALL in *Cambridge History of India*, vol. III, 1928, pp. 601 and 602.

securing of the broken wall at the north-east corner of the Masjid and of the long wall above the arches of its façade, as well as repairs to the walls of the tomb. Further clearance work has been executed during the year 1932-33 and among the sculptures discovered in that year are twelve figures of the Sun God, again in 12th century style, and evidently re-used by the masons when the Hindu temple was converted into a Muslim structure. The repair works carried out by the Public Works Department included the erection of a retaining wall of brick-in-lime at the north-east corner of the tomb along the public road, the damaged stone masonry of the walls of the tomb which are open to the sky has been carefully dismantled, after properly numbering the stones, and rebuilt, with cement pointing and waterproofing of the tops of the walls.

Bagerhat, Khulna District: The Sath Gumbaz Masjid. Extensive repairs have been carried out at this fine ancient Masjid, dating from *circa* 1459 A.D.,[1] and built by Khān-i Jahān 'Alī (commonly known as Khanja Ali). It may be mentioned here that the name 'The Sixty-Domed-Mosque' is somewhat misleading; there are, as a matter of fact, sixty pillars, but the number of domes is seventy-seven. The floor of the building has been thoroughly renewed with brick on edge during the year 1930-31. (Plate XIV, c). During 1931-32 earthen *bands* have been provided on three sides of the building in order to prevent rainwater from flowing into the compound.

Gaur and Pandua, Malda District. Large numbers of visitors are attracted by the monuments in this area, and measures of general improvement have been carried out to many of the ancient structures here. During 1930-31 rooms have been constructed to accommodate the caretaker and the *darwān* who look after the monuments and the collection of antiquities now brought together by the Department in the Gumti Gate at Gaur. Minor repairs have been done to the doorway of the *Chirāgh Minār* at Gaur, (built by Saifu-d-din Firuz Shah, 1487-89 A.D.), to the Dakhal Darwaza at Gaur, to the Adina Masjid at Pandua *etc.*

The earthquake of January 15th, 1934, has, unfortunately, done a great deal of damage to many of the monuments in these localities. The Baisgazi Wall, a portion of the royal citadel at Gaur, which had been recovered from thick jungle growth only a few years ago, was practically razed to the ground, with wide fissures and cracks in whatever portions were left standing. The Dakhal Darwaza suffered only lightly; the Dhanchak Mosque, however, has been seriously damaged, most of the facing work having fallen and several bad cracks having appeared. The inner stone facing of the Firozpur or small Golden Mosque has also fallen. One of the walls of the Gunmant Mosque was badly affected, and the same is the case with the Great Adina Mosque at Pandua, where the arch of the south wall was damaged and large cracks have appeared. The Aurangzeb Mosque at Pandua has also suffered a great deal. The Department has repaired most of the worst damage during the year 1934.

Jatar Deul: Sundarbans, District 24 Parganas. This interesting temple of Śiva, variously known as Jatar, Joter or Jhatar Deul (temple) had been

[1] Sir John MARSHALL, in *Cambridge History of India*, vol. III, p. 604.

previously inspected by Dr T. BLOCH[1] and Mr J. F. BLAKISTON.[2] According to the *List of Ancient Monuments in Bengal* (1896) this temple was constructed by a Raja Jayanta Chandra in the year 897 B.S., corresponding to 975 A.D. This date is based upon a copper plate inscription discovered in the course of the clearance of the jungle which surrounded the monument. The special repairs so far executed have been unsatisfactory, as modern table-moulded bricks had been used for repairs and as the shape of the *śikhara* had been altered. Considerable improvements have been effected during the year 1930-31 and the present state of the temple can be seen in plate XIV, fig. *b*.

The Stone Temple at Garui, Burdwan. Special repairs have been in progress at this interesting small shrine for several years and were completed during the year 1931-32. The temple being the only one of the curved cornice type made in stone, great care was taken to give a faithful reconstruction of the original shape, and detailed drawings have been supplied for the guidance of the Public Works Department. The compound has been levelled, dressed and surrounded with a cattle-proof fencing. (Plate XVI, *a* and *b*).

The Patpur Temple at Vishnupur, District Bankura. Special repairs have been carried out during the four years under report to this interesting monument erected by the Rajas of Mallabhum, modern Vishnupur. The plinth has been cleared, the compound has been surrounded by an earthen wall; loose stones in the ceilings of the verandah on all four sides have been refixed, displaced stones in the *śikhara* and elsewhere have been reset in cement mortar and similar minor works have been carried out during 1930-33.

Most of the temples at Vishnupur are owned by the descendants of the former semi-independent dynasty of Vishnupur rulers, whose present indigent circumstances do not allow them to keep the monuments in good condition. The difficulty, however, lies not with them but with the priests now occupying the temples who insist on using the verandahs for cooking their *bhoga* (offerings). The walls and carved capitals *etc.* suffer a great deal from smoke and soot, and it was found expedient to build two sheds in the compound of the Madangopal and Lalji temples respectively as the only means of persuading the priests to carry on their cooking elsewhere. No other form of worship is detrimental to the maintenance of these monuments by Government.

Repairs have been also carried out to the attractive *stone chariot* near the gateway of Vishnupur Fort which is undoubtedly a miniature stone replica of the wooden chariots still in use in connection with religious festivals in that place. This little monument measures about 10 feet square at the base, and during the year 1933-34 Mr DIKSHIT replaced a missing wheel, had the cracks grouted and a wire fencing erected around it.

Ancient Remains at Silua, Noakhali District. The remains at this site consist of a low mound with fragments of a colossal image upon it, the pedestal of which had an inscription of the 2nd century B.C. till a very recent date when miscreants rubbed it out. It is probable that the remains belong to the earliest

[1] *Archl. Survey Report, Bengal Circle,* 1904-5, pp. 8*ff.*
[2] *Archl. Survey of India, Eastern Circle,* 1914-15, pp.

ones known in Eastern Bengal and, as it was impossible to transfer them to a place of safety. the area was acquired under the Ancient Monuments Preservation Act, and a fence has been erected around the site to protect it from further damage until it will be possible to examine the remains thoroughly.

Ismailpur, District Rangpur. The *Dargāh of Shāh Ismā'īl Ghāzī* is an unpretentious structure of considerable local sanctity. Ismā'īl Ghāzi was a distinguished Arab general of Ruknu-d-dīn Bārbak Shāh, Sultan of Bengal. According to the *Risālatu-sh-Shuhadā*, Isma'il subdued the refractory Hindu prince of Orissa, and forced the King of Kāmarūpa to submit to the allegiance of his master. He was, however, implicated in a false charge of treason by Bandasi Rāī, the Hindu governor of Ghoraghar, evidently from jealousy, and the Sultan put him to death in the Hijra year 878 (1473 A.D.). After his death he has been canonized as a martyr. His head is supposed to have been interred at this *dargāh*, while his body is said to lie at Mandaran in the Hooghly District. The present Ismailpur building is apparently of later date than the death of the saint, and must have undergone several transformations. The earthquake of July 1930 had badly shaken the structure and repairs were urgently needed. A number of cracks appeared in all the arches, and masonry below the ceiling and the back wall has fallen down in places. All the damaged masonry has been dismantled during the year 1932-33 and rebuilt, while a new half-terraced roof has been provided.

Ancient Monuments in Assam. Conservation work in Assam was limited mostly to repairs necessitated by the recurring earthquakes, and to the annual regular repairs to ancient monuments. A number of repairs may be mentioned, *viz.* to the *Devidole* and *Vishnudole Temples* at *Gaurisagar*, both monuments having been placed in a structurally sound condition during 1930-33; attention was given also to several monuments in the Sibsagar District, the *Golaghar* (Magazine) at *Jaysagar*, and the *Sivadole Temple* at *Sibsagar* deserving special mention.

The *Kachārī Monuments at Dimapur* have suffered badly from earthquake, and considerable damage was done to the fine gateway to the enclosure built in the Muhammadan style. The enclosure contains series of memorial columns, sometimes described as "chessmen", impressively arranged in rows. (Plate XIV, *c*). The cracks caused by the earthquake have been properly repaired with iron clamps, and the roof has been rendered watertight. The brickwork of the front wall has been partly renewed, and the exposed masonry of the tower on the right side treated with cement. (Plate XIV, *d*).

The only group of monuments in the *Surma Valley* in Assam protected under the Preservation Act consists of the ruined palaces and temples at *Khaspur near Silchar*, built by the last kings of the Kachārī race who settled down in the plains after having been driven down from the hills. During the year 1932-33 the Baradwari temple was taken in hand for repairs and the entire roof has been renewed with fresh concrete. At the Ranachandi temple minor repairs have been carried out.

The only special repairs executed during 1933-34 were those to the *megalithic bridge* at *Umiakneih* in the Jaintia Hills; the rest of the conservation work in that year consisted entirely in repairs necessitated by the earthquake of August, 1932. and related mainly to the monuments at Sibsagar and Gaurisagar.

SOUTHERN CIRCLE : MADRAS PRESIDENCY AND COORG.

Mr Hasan Hayat KHAN was officiating Superintendent of the Southern Circle from March 1931, and has been promoted to Superintendent with effect from August 26th, 1933. All the four reports summarized in the following pages have been submitted by him, and conservation work has been in his charge in so far as it has been carried out departmentally. This applies specially to conservation work at the site of Nāgārjunikoṇḍa, whilst most of the other repairs have been done through the Public Works Department. The number of monuments in the Superintendent's charge exceeds three hundred, and Mr KHAN's reports usually refer to about a hundred ancient monuments; it is, however, impossible to give here anything but a very brief extract of his reports.

The Bhavanārāyaṇa Temple at Bapatla, Guntur District. This monument is of considerable interest on account of the inscriptions on the walls of the sanctum containing a Vishṇu image and on the outer faces of the enclosure walls of the main building. These walls were bulging out, and the Superintendent had them repaired and rebuilt during the year 1930-31 with lime concrete and plaster.

The Rock Fort at Gooty, Anantpur District. This complex of monuments received the attention of Mr KHAN during several years, especially in 1930-31 and 1931-32. Old material found on the site has been utilized when repairing dilapidated walls *etc.*

The Śiva Temple at Kambaduru, Anantpur District. This temple is an interesting example of Chalukyan architecture. The *mahāmaṇḍapa* suffered from leakage of rainwater in many places, and repairs have been carried out to the dilapidated roof and the adjoining parapet wall during 1930-31.

The Śiva and Gopālakṛishṇa Temples at Timmalapuram, District Bellary. These large structures have been built by Achyūta Deva Rāya in the characteristic Vijayanagara style of the 16th century A.D., although they are not as fine as the temples of the same period at Hampi in this district. Both temples contain inscriptions of considerable interest. Conservation work during 1930-31 and 1932-33 comprised the strengthening of the *gopura* with a buttress wall at the Śiva temple; the replacement of decayed and broken lintels by new ones; resetting of loose stones, and securing the disturbed masonry of the eastern and western shrines. Similar were the repairs done to the Gopālakṛishṇa temple. A large tree which was gradually causing more and more harm had to be uprooted. (Plate XVI, figs. *c* and *d*).

The Gurramkonda Mahal, Chittoor District. Conservation work was carried on at this structure, situated under the 17th century Muslim Fortress, during the years 1930-31 and 1931-32. The *chhajjā* stones as well as the wood work

beneath the cornice had to be renewed as they were in a very unsound condition, cracked and faulty in many places. This work was unavoidably delayed during the first year owing to some difference between the contractor and the labourers.

The Palghat Fort, Malabar District, built by Tippu Sultan of Mysore in the 18th century, was badly overgrown with vegetation. This as well as a large quantity of water hyacinth from the surrounding moat, have been cleared away during 1930-31.

The Sankaridrug Hill Fort, Salem District, situated on a lofty granite hill, about 2,300 feet high, is said to have been one of the strongholds of Tippu Sultan. In any case the place remained in occupation at a much later date, as there is a gateway (ninth gate) which must have been built by the British. The abnormal rainfall of November 1930 caused much damage to the eighth gate and to the front walls around it, as well as to the fourth and sixth gates. The damage has been repaired during 1931 and the subsequent years.

The Vaīīśvara Temple at Tiruvalisvaram underwent extensive repairs during the four years under review. The terraced roofs of the Svami Sannadhi *maṇḍapas* have been repaired; the dilapidated walls which bear important inscriptions of the Chola princes as viceroys of the Pāṇḍya Kingdom have been dismantled and thoroughly rebuilt. The inscriptions which were threatened by the bad state of the walls have now been placed in safety. (Plate XVII, *c*.)

The Ruins at Hampi. Due attention was paid to this important group of buildings throughout the period under reivew. The approach roads have been widened during 1931-32 to allow motor vehicles to reach the Zenana and Danaik's Enclosures and their adjacent buildings; the cracked stone ceiling of the Kalyāna *maṇḍapa* has been made secure by means of iron straps and rods: and the portion of the Hazāra Rāma Temple which was out of plumb, has been repaired. During 1932-33 a large number of petty repairs have been carried out to the Queen's Bath, the Octagonal Bath, the Kṛishṇa Temple *etc.*, and the annual maintenance work was carried on during 1933-34 also. (Plate XVII, *d*.)

The Gingee Fort, South Arcot District. This large complex of fortifications covering and connecting three hills contains a number of buildings of archæological interest, one of the most important among them being the *Venkataramanasvami Temple*. The compound wall of this monument threatened to collapse and the *maṇḍapa* was badly damaged by the leakage of rainwater. Both underwent thorough repairs during 1931-32 and the *maṇḍapa* has now been put in a safe condition (Plate XVII, *a*). The overhanging cracked terrace of the *Isvarankoil* has been secured by the support of a buttress. An unsecure balcony in the outer fort wall has been also thoroughly repaired. A number of minor repairs have been carried out in this Fort during the year 1932-33 which cannot be mentioned here in detail.

The "Seven Pagodas" at Maralivaram (vulgo: Mahabalipuram). In 1931-32 a wall has been constructed on the east and south of the so-called "Five Rathas", partly to keep cattle out of the enclosure and partly to protect the monuments from an accumulation of sand. The roads leading to these monuments

and to the so-called Shore Temple are now shaded by young trees and have been well levelled and gravelled for the convenience of the large number of visitors to these outstanding examples of Pallava art. The *Shore Temple* suffered during the last year from the action of the waves of the sea, and the cyclone of 1930 has damaged considerably the revetment wall of this structure on its north-east side, several portions of which collapsed and exposed part of the temple. Mr KHAN has repaired the damage with the old material available on the spot.

The Fort of Siddhavattam, Cuddapah District. This structure was originally erected by Ananta Raja in the year 1303 A.D., and subsequently occupied by the Muslims. It contains several buildings of interest, one of which is a Masjid that was in urgent need of repairs. Its terraced roof and main wall were both cracked and partly fallen; these have been rebuilt and replastered; *débris* and jungle vegetation have been cleared from the monument.

The two Royal Residences at Chandragiri, Chittoor District. The two best preserved buildings in the fortified residence of the expatriated kings of Vijayanagara are called the *Rājā Maḥal* and the *Rānī Maḥal,* both being built in a curious mixed style. The Raja Mahal is used partly as a Travellers' Bungalow, and is an exceptionally large building of three main storeys, consisting of halls and rooms surrounded by verandahs and projecting balconies of an unusual shape supported by numerous brackets; the façade is broken by a large number of openings of various shapes, tending to give a rather restless and disharmonious general impression, which is only emphasized by a number of strange *gopura*-shaped turrets of different sizes which rise over the roof terrace. (Plate XVII, *b.*) Both Mahals needed a great deal of repairs to the walls and floors which were in a bad state, and these have been carried out by the Superintendent during 1932-33.

The Vasti Jain Temple, Sultan's Battery, Malabar District. This small but archæologically interesting temple was in a very dilapidated condition, and most of the expenditure on conservation during the year 1933-34 has been spent on its repairs. The upper part of the temple had partly collapsed and the rest was threatening to fall to ruins very soon, several trees having forced their way among the great granite slabs of the structure. The trees and roots have been entirely removed, the fallen portions rebuilt, the pillars refixed in their proper places, and the whole building made altogether sound.

The Site of Amarāvatī, Guntur District. There is a wooden enclosure at this site in which are kept fragments of pillars, beams and other finds recovered during the excavations. The fence allowed of mischievous boys climbing over it, and it was found necessary to increase its height. This was done in 1933-34, when a gate has also been provided.

The Hill Fort of Gandikota is situated some six miles west of Jammalamadugu in the Cuddapah District, on the summit of a rock, some 300 feet high, rising suddenly above the river Pennar. It was originally built by a chief called Kapa Maharaju in A.D. 1290, said to have been rebuilt by the Vijayanagara king Harihara, and occupied as the headquarters of a Nawab Mir Jumla after the battle of Talikota (1565). The Nawab is credited with several of the

buildings in the Fort, among others the Juma' Masjid. Tippu Sultan held the Fort for some time, until ultimately it fell into the hands of the East India Company. The Fort is magnificently situated, and the gateways, two temples, a tower, the fine Masjid and a huge granary building are among the remarkable monuments regularly maintained in good condition by the Archæological Department. During the year 1933-34 the Superintendent carried out a number of repairs to the roofs, floors and walls of most of the structures.

Conservation Work in Coorg. During the year 1930-31 special repairs were carried out to the *Jaina temples at Mullur* and to the *Fort of Mercara*, the latter monument receiving further attention during the three subsequent years. The old palace in the Fort is not a protected monument though it is undoubtedly interesting and would have been worth preserving. The Provincial Government uses it, however, for office purposes and it is a matter for regret that the Archæological Department was never consulted when repairs were carried out. Lately these repairs consisted of such fundamental alterations that the architectural character of the original building became entirely lost, although its ancient appearance could easily have been retained should expert advice have been consulted.

BURMA CIRCLE.

Monsieur Charles Duroiselle submitted the report for the Burma Circle (his last one) for the year 1930-31. He had been Superintendent of this Circle since December 1919, and handed over office on June 26th, 1931. His splendid work of many years will be remembered with gratitude by all archæologists.

Mr Maung Mya wrote the reports for the years 1931-32, 1932-33 and 1933-34. Lack of space forbids publishing any of these reports at full length, and the following is a very much abbreviated summary of the conservation done in that Circle.

The Abeyadana Temple, Myinpagan village, near Pagan. This Buddhist temple is variously known as Ameyadana, Apeyadana and Abhyadana. Tradition assigns it to King Kyanzittha (1084-1112 A.D.) and identifies it as the place where Apeyadana, his wife, came and waited for him when he was hiding near the place now marked by the Nagayon temple during one of his flights from the wrath of King Anoratha, his father and predecessor (1044-1077). An inscription in ink, found on the wall of the temple, and datable on palæographical grounds as from the 15th-16th century, states that the temple was built by the Chief Queen of King Kyanzittha and its name was *Apératana*. Although this inscription is some five hundred years later than the king referred to, it is evident that the tradition connecting the temple with the queen is very old.

The temple faces north, and consists of a square basement surmounted by a *stūpa* and preceded by a porch with three entrances. The basement is ornamented with perforated stone windows, and there is a vaulted corridor inside running round the central block. In the latter there is a deep recess forming a sanctum on the north, and in it is enshrined a large image in brick of a seated Buddha. The *stūpa* on the top has a bell-shaped dome resting on three

terraces, and is surmounted by an *āmālaka.* Many circular discs one above the other tapering towards the top form its crowning feature. (Plate XVIII, *a.*)

The chief interest of the temple lies in the paintings with which the inner faces of its walls are decorated and which have been noticed for the first time during 1930-31 by Mons. DUROISELLE. A detailed account of these will be found *infrâ* under Section II: Exploration. These mural paintings represent divinities of the Mahāyāṇa pantheon unknown (as far as can be ascertained) anywhere else in Burma.

The repairs to the building comprised the removal of *débris*; the exposing of the plinth and underpinning wherever necessary; the restoration of the missing portions of voussoirs in the arches; rebuilding of missing dilapidated brick-work; waterproofing of the pediments; replacing of the rotted wooden lintels where necessary by concrete beams, and many similar necessary repairs. Finally the Superintendent had the enclosure walls round the building rebuilt in keeping with the still extant northern wall.

Shwesandaw Pagoda, Pagan. In a brick shed in the precincts of this Pagoda there is a colossal recumbent image of the Buddha measuring nearly eighty feet in length. It was built in the 11th-12th century A.D., and though made of brick and plaster, it is still in a surprisingly good state of preservation. The image is a Protected Monument, and necessary repairs were carried out during 1930-31 to the shed in order to protect it from danger.

Fort Dufferin, Mandalay. The *pyatthats* (pavilions with highly ornamented roofs) on the Fort walls at Mandalay are a special feature of Burmese architecture the origin of which reaches back to at least the 11th century A.D. Unfortunately they are built of wood and unless they are properly looked after, they will all disappear. Those over the main gates have seven receding roofs, the others five. They were built in 1857. In 1901 seven of them had already disappeared, and the strong winds of Mandalay at the beginning of the monsoon demolish every year one or two. According to a rough estimate, it would cost about a lakh of rupees to preserve thoroughly those now extant: an amount which can not be raised, unfortunately, in these bad times.

The Archæological Department carries out, however, as much conservation work as funds allow at present. The importance of these *pyatthats* is evident, and their prominent position in the architecture of the Fort walls at Mandalay can be well seen in Plate XVIII, fig. *d.* During the year 1931-32 the Public Works Department restored according to instructions *pyatthat* No. 39, one of the pavilions with five storeys of roofs. The feet of the pillars had completely rotted, and a violent gale on May 11th, 1931 left the whole structure leaning to one side, pieces of carving having fallen down. New pillars have now been inserted, the cement footing has been renewed, and the roofs and carved portions restored as far as possible. It is hoped that a new lease of life has been given to this *pyatthat*, especially after it has passed the severe test of a strong cyclone (May 12th, 1932) undisturbed. (Plate XVIII. fig. *c.*)

During the year 1932-33 *pyatthats* Nos. 3, 24 and 27, which suffered from the last mentioned cyclone, have been strengthened; Nos. 9 and 48, however,

were in such a precarious condition that they were a constant danger to the public, and had, consequently, to be dismantled. Six more *pyatthats* received the attention of the officer in charge.

In 1933-34 further repairs have been carried out to *pyatthats* Nos. 27, 28, 29, 30 and 31, which were all out of the vertical; and petty repairs and minor conservation work have been done to six more pavilions.

Hmawza (Old Prome). The Bawbawgyi pagoda at Hmawza is one of the most interesting monuments in Burma. There are a number of grounds on which it can be assigned to an age earlier than the 11th century A.D., a period of comparative antiquity for Burma. It is a cylindrical building with a cone-like peak and not unlike the casket-shaped *stūpa* on a relief slab from Amarāvatī.[1] During the year 1931-32 the *āmālaka* below the iron *hti* was in need of repair and the *hti* itself was leaning to one side. These were attended to by the Superintendent; the *hti* has now been anchored in cement concrete, and the *āmālaka* thoroughly repaired and cleared of vegetation growth. The cracks around it and on the side of the dome have been cement grouted and lined with brick. Minor repairs have been carried out also to the rest of the brickwork. These repair activities extended over two years and the pagoda was again in a good condition at the end of 1932-33.

The Kubyaukkyi Temple, Myinpagan. A considerable amount of conservation work was carried out at this remarkable monument during the year 1931-32. The temple consists of a square basement surmounted by a *śikhara* with curvilinear roofs resting on terraces, with a *maṇḍapa* projecting on the east face. (Plate XVIII, fig. *b.*) Curvilinear *śikharas* are rare in Burma, and the few monuments with that feature belong all to the later part of the 11th century A.D. The greatest importance, however, attaches to the paintings in the sanctum, in the corridors surrounding it, and in the entrance porch. These paintings may be considered to be contemporaneous with the building, and if so, they are among the earliest now extant at Pagan. Some are in a good state of preservation, with patches here and there where the plaster has broken off. Additional interest attaches to these paintings on account of the legends inscribed in old Mon characters under each of the scenes they depict; these inscriptions are not only interesting from an epigraphical point of view but also help us to identify the scenes.

As an example of the style of these paintings, a copy of a panel is reproduced in the Frontispiece. The inscription in Mon reads: "*tirta to' pa pratihār*", which is translated by Mr Maung MYA as '*tīrthikas* (ascetics) were performing miracles'. The ascetics are evidently the naked personages of various skin colour in the upper portion of the painting, shown around a bearded Buddha. Almost all the figures, including the two rows of seated disciples (or admirers) are bearded and provided with haloes, and a curious feature of the painting is the occurrence of people with light and others with dark skins: probably an indication of racial differences. Mr Maung MYA believes that the scene depicts the well-known legendary incident of the Buddha at Śrāvastī according to which

[1] Cp. GRÜNWEDEL:—*Buddhist Art in India*, fig. 8, p. 29.

he entered a contest of display of miraculous faculties with the Brahmanic ascetic Kāśyapa and his followers.[1]

The repairs to the Temple consisted in restoring the missing rings of the arched roof above the porch and in making it waterproof; in resetting brick-work in lime and cement mortar in the *śikhara* and the terraces above, in filling up the holes and grouting the cracks in the roofs, and in repairing the stair-cases on either side of the porch. Further repairs, especially to the brick-work of the walls, were carried on during 1932-33, when a brick masonry step has also been constructed near the north-east corner of the temple.

Lawkananda Pagoda, Thiyipitsaya village, Pagan. This pagoda is precariously situated on the Irrawaddy river bank, and action had to be taken during 1932-33 to save the building from further damage from the floods. The damaged portions of the structure have been repaired by relaying the stone blocks scattered about, and adding new stones where necessary.

Two Temples at Myinpagan village, Pagan. During the year 1932-33 a quantity of minor repairs have been carried out at the Seinnyet Ama Temple and Nagayon Temple, both in the village of Myinpagan. The repairs related mainly to the uprooting of jungle growth, and repairs to the walls and domes as well as to the enclosure walls surrounding the structures.

Dhammayazika Pagoda, Pwasaw village, Pagan. This shrine was overgrown with vegetation, and the inner enclosure walls round the platform had fallen out of repair; cracks were appearing in certain corners of these walls caused by the pillars subsiding after the repairs done to them some time ago. During 1932-33 the Superintendent attended to the above and after the eradication of the shrubs, thorough repairs have been executed to the walls in question.

The Kondawgyi Temple and the Kyaukku Onhmin at Nyaung-u, Pagan. The enclosure walls and the gateways of the former temple threatened to collapse and thorough repairs have been done to these during the year 1932-33. The Kyaukku *Onhmin*, or Cave Temple, is one of the most interesting monuments at Pagan. It is situated in a ravine among the hills to the east of Nyaung-u, and is an important place of retreat for monks. During the year 1932-33 the Superintendent rebuilt a portion of the west wall which fell down during the rains of the previous year, and he made good such damages as had been caused by the collapse of the wall. Drains were provided to carry off rainwater from the topmost terrace, and the entrance gate has also been repaired.

The Palace Buildings at Mandalay. Annual repairs have been regularly carried out to the Palace buildings at Mandalay, and the brickwork, the roofs, the floors, the verandahs and drains received the necessary attention of the Superintendent. During 1932-33 a portion of the retaining wall on the north side of the Palace platform collapsed under the action of rainwater, and this has been reconstructed for a length of 55 feet. A considerable amount of special repairs is badly needed, amounting to some 48,000 rupees in the estimate

[1] The Editor feels that, although the inscription reported by Mr Maung Mya does allude to miracles and ascetes, there is nothing in the painting itself to justify this identification. Other representations of this incident are marked by elements which specially connect them with the miracle at Śrāvastī, but in the present case we must satisfy ourselves with what the inscription says, and that is not very explicit. The identification must remain, therefore, conjectural.

of the Superintendent, but the heavy cuts in the grants to the Department hardly allow any special repairs. During 1933-34, however, it was found possible to set aside a small sum for this purpose, and Mr Maung MYA carried out important conservation work at the *Chief Queen's Confinement Room* which was already threatening to collapse.

This room, like the other apartments in the Palace, is made of wood, but bricks are used in the roofing. Now that the supporting timber work had rotted with old age, the whole superstructure had become unsafe, and had to be dismantled. The teak foundations have been first repaired and replaced where necessary, and cement plaster on expanded metal lathing has been substituted for the brickwork which was far too heavy for the timber posts. The plastered surface of this cementwork has been whitewashed in such a way that it gives the same appearance as beforehand. The work was not finished at the end of the last year under report.

Extensive annual repairs have been carried out with the co-operation of the Public Works Department also to the '*Apartment with a Fountain*', the *Lily Throne Room*, and the *verandah west of the Peacock Throne Room.* In the last room the same policy was adopted as at the Chief Queen's Confinement room: the topheavy brickwork has been replaced by cement plaster over expanded metal lathing; a considerable amount of timber work, pieces of teakwood carving, plank ceiling *etc.*, have been restored, and the teak posts wherever necessary have been well supported by cement concrete footings.

The *gardens of the Palace* have been kept in good order by the usual staff of *malis* who discharged their duties satisfactorily. The lawns have received special attention, and have somewhat improved.

Public Co-operation in the Preservation of Antiquities. The Superintendent visited a number of out-of-the-way places and conferred with the local elders and monks with a view to enlisting their co-operation in the preservation of antiquities. These places included Thaton and Bassein in Lower Burma, and the old site of Peikhtanomyo (Vishṇu City) in Taungdwingyi District. As an instance of how important antiquarian remains suffer from neglect, it may be mentioned that of the seven inscribed slabs found within the precincts of the Shwezayan Pagoda, Thaton, one of the oldest and most valuable monuments in the district, one was found upside down, the other was recovered from a dust-heap, and all of them were exposed to the mercy of weather and mischievous persons. As a matter of fact, hardly anything can be read now of the formerly clear inscriptions. It was also brought to the notice of the Superintendent that hundreds of terracotta tablets had been found during the digging for wells and buildings, which have all been thrown away. Mr Maung MYA found the elders and trustees of the temples willing to undertake the care of antiquities within their power. The trustees of the Shwezayan Pagoda convened a special meeting and passed a resolution to set apart a building in the Pagoda compound for the purpose of preserving therein such antiquities as may be brought to their notice. The Superintendent also succeeded in persuading them to be less lavish with whitewash over the relievoes. The Trustees of the Shwe-Mok-

Taw Pagoda, Bassein, headed by U Kyaw ZAN, K.S.M., have also undertaken to take more interest in the preservation of antiquities. It can be said, therefore, that Mr Maung MYA has done very useful work in enlisting the support of a number of influential people.

RAJPUTANA AND CENTRAL INDIA.

Mr H. L. SRIVASTAVA visited a number of places in the Rajputana and Central Indian States during the two years 1932-33 and 1933-34, where conservation work was then in progress. For these two years, therefore, we possess first-hand information from his pen about the conservation activities of the places he visited. Unfortunately no such tours could be made in 1930-31 and 1931-32, for which two years we have, however, brief reports of works in progress from the respective Darbars, or, in the case of Bhopal State from the Superintendent of Archæology, Bhopal State (Mr B. GHOSHAL). In the following brief summary besides Mr SRIVASTAVA's own reports, some of the information supplied by the States has been utilized.

Ajmer. Besides the annual maintenance of the marble *barādarīs* erected by Shah Jahan in 1637 on the Anasagar Band, repairs have been carried out during 1932-33 to the terraced floor of that structure. With a view to preparing measured plans and drawings of eleven important monuments at Ajmer, Mr HARGREAVES, then Director General of Archæology in India, obtained the sanction of the Government of India in 1930 to engage a draftsman for three years.

Udaipur State. At *Chittorgarh*, the Mewar Darbar have restored the 8th and 9th storeys of the Tower of Victory and replaced the old dome by a new one. The design selected for the dome is similar to the roof of the *Sabhāmaṇḍapa* of Kumbhashyamaji's Temple which is of the same date as the Tower, and it is perfectly in keeping with the monument. This was done in 1932-33. In the same year Mr SRIVASTAVA reports, the Museum of Udaipur possessed no catalogue of inscriptions and coins, and the images and slabs with inscriptions were whitewashed. The Curator has been requested to undertake this task.

Bhopal State. The monuments at *Sanchi* have been kept in a very good condition by Mr B. GHOSHAL whose careful work is praised both by Sir John MARSHALL (who visited the site in 1930 in connexion with his monograph on Sanchi) and by Mr SRIVASTAVA. During the years under review, several pathways have been improved, the jungle around the monuments regularly cleared, and minor objects found around the site placed in the Museum.

The *Fort of Raisen* is a monument of great historical interest. During the year 1931-32 a votive *stūpa* has been discovered bearing an inscription which is believed to be as old as the second century A.D. Later period images of Nandis and Gaṇeśas prove a prolonged occupation of this site, and extensive conservation work is indicated. The Superintendent carried out yearly such repairs as the finances allowed. The jungle on and around the Fort which entirely covered it, has been thoroughly cleared, so that the walls are now visible from near and far. During this process two entrance gates which were almost entire-

ly buried, came to light. The dome of the fine masjid in the Fort, the roof of the Itardan-ka Mahal and *īdgāh* near it have been throughout repaired, and the water-tanks cleared of weed. During 1933-34 a beginning was made with the restoration of the so-called Palmyka Temple-Mosque. In the southern wall of this structure there is an inscription in Brāhmī characters, and measures have been taken to protect this and the decaying roof from damage.

Chhatarpur. Repairs to the Negwan Temple in Chhatarpur State have been brought to completion during the years 1930 to 1933. Part of the expenditure was defrayed by the Government of India and the rest was contributed by the State. Of the Natua Temples at Daharra, the two north-east and south-east corner shrines have been rebuilt by resetting the disturbed stones and underpinning the plinth. The dislodged stones in the *chabūtrā* have been properly reset.

Dhar State. Considerable amounts have been spent by the Darbar on conservation work in the State during the four years under report. Since 1930-31 no more grants-in-aid have been contributed by the Government of India, and the Darbar decided that all conservation and maintenance should be met from the Dhar State funds. During 1930-31 special conservation works were carried out at *Mandu* to the Rupmati Pavilion and the Nilakantha; during 1931-32 to the interesting Hindu Caves near the Lohani Gate, to the Taveli Mahal and the *hammām* attached to it, to the exquisite little octagonal water-pavilion projecting over the Kapur Tank in front of the Jehaz Mahal, and to the picturesque water-palace in the Munj Tank ("Jal Mahal").

During 1932-33 the semi-octagonal pavilion at the Champa Baoli which was in a precarious condition and threatening to fall, has been dismantled and rebuilt. A number of improvements have been effected at the Kapur Tank, and the marble balcony which had fallen down at the Nahar Zaroka Palace, has been re-erected. An interesting structure of a bath fitted for the supply of hot water and hot steam through hollows in the floor with a conduit fixed with a metal pipe for carrying cold water has been brought to light towards the south gate of the Taveli Mahal. The Caves towards the Lohani Gate mentioned above consist of a square hall with four rock-cut pillars, the verandah in front having lost its roof. Towards the south is a passage, and further south another hall of the same size. In front of the passage is a small tank, part of which is buried under the ramp. Besides many fragments of sculpture mention may be made of two images of Vishṇu, one resting on Śesha, with attendant figures of Brahmā, ten *avatāras etc.*, and another with Vishṇu and his consort seated on his left thigh (Lakshmī-Nārāyaṇa). An inscribed slab bearing the text '*kokadeva*' was also found together with the images described above.

During 1933-34 a number of repairs have been carried out to the Water-Palace in the Munj Tank, on the Nilakantha, the Jami' Masjid, Ek-thamba Mahal, Jehaz Mahal, Champa Baoli and the Kapur Tank Pavilion.

Datia State. Conservation work was continued on Bir Singh Dev's Palace at Datia which was damaged by lightning in 1925. Half of the expenses have been contributed by the Government of India, the other half being added by the

State. The work consisted mainly in restoring the damaged balconies in the 4th and 5th storeys, and in minor repairs to pillars, brackets, *chhajjās*, *etc.* Mr SRIVASTAVA whilst inspecting the improvements, drew the attention of the State to the importance of providing a lightning conductor,—a measure already recommended among others in the original conservation note by Mr B. L. DHAMA. During the year 1933-34 this recommendation has been followed. During the earthquake of January 1934 a part of the foundation of the Palace together with the verandah on the south were damaged, and these have been properly restored by order of the Darbar.

Jodhpur State. Pandit Bisheshwar Nath REU, Archæological Superintendent, Jodhpur State, carried out repairs to the *baradarī* at *Sadri* and to some palaces in Nagaur Fort, during the year 1932-33. The Museum at Jodhpur received 12 gold coins belonging mostly to the South Indian Fanam variety and to the Mughal emperors.

Jalore, the ancient Jābālīpura, contains two monuments of archæological interest, *viz.* the Topkhana in the heart of the town, and the Fort which crowns a hillock about a thousand feet high. The building now known as Topkhana was originally a mosque said to have been built by Alau-d-din. In plan it is similar to that of the Adhai-din-ka-Jhompra at Ajmer: the cloisters have three rows of pillars and two rows of domes. Repairs to the Topkhana during 1933-34 consisted in waterproofing the domes and laying a drain in the northern courtyard. Repairs to the Abhawa-ka-Mahal and a fallen *baradarī* at the Nagaur Fort consisted in improving the ceiling, and providing new doors and wire netting to the open portions in order to prevent bats from disfiguring the building. The fountains which were out of order, are again playing. During the same year (1933-34) a few earthen jars have been brought to light in a garden at Mandor; two of them bear the potter's name, विश्वहष inscribed in Gupta characters of about the 5th century A.D. An 'image of a king' is also reported to have been discovered at the same spot, but no details are given as to the age, style *etc.* of this find. Pandit REU continued to give proper attention to the monuments of the State. A number of interesting coins have been acquired, and the Darbar of the State presented 21 inscribed copper-plates to the Museum.

SECTION II.-EXPLORATION AND RESEARCH.

EXCAVATIONS AT MOHENJO-DARO.

By Mr E. J. H. Mackay.

Editor's Preliminary Remarks.

Large scale excavations at Mohenjo-daro were suspended on November 6th, 1931, after which hardly any excavation worth mentioning was done. Mr MACKAY conducted the operations in 1930-31 as will be seen from his note which follows. His report has been printed here without any alteration worth mentioning; a few words only having been changed by the Editor, who had to curtail the text here and there. Such sentences as have been omitted have been selected with the greatest care so as not to detract from the lucidity and value of the exposition. All the photographs submitted by Mr MACKAY have been published. (Plates XIX to XXIII *incl.*)

A brief report will be found after Mr MACKAY's contribution, giving an account of the excavations on small scale which Mr K. N. PURI, Custodian of the Museum at Mohenjo-daro, and Mr Q. M. MONEER conducted during 1933-34. As, unfortunately, there is no photographer and no draftsman attached to the site any more, no illustrations can be given of these latter diggings.

Scholars all over the learned world will deeply regret that the work so splendidly begun at this remarkable site cannot at present be brought to completion owing to the cut of grants for this purpose. As most readers will realize, the area of the ancient city of Mohenjo-daro is enormous, and only an infinitesimal part of it has been explored so far.—*Editor.*

Excavations during 1930-31 in Dk Area, G. Section.

The excavation at Mohenjo-daro was resumed on October 20th, 1930, shortly after my return from leave,—Mr MACKAY reports. From that date until February 1st, 1931, I had the able assistance of Mr H. L. SRIVASTAVA, Asst. Superintendent, Archæological Survey of India, until he was transferred to Agra to take charge of the Northern Circle. Mr Devi DAYAL, acting Excavation Assistant then took Mr SRIVASTAVA's place up to March 28th, 1931, when the work of the season was concluded.

The area selected for excavation was a considerable space immediately north of the area in the Dk mound that has been excavated during the previous three seasons. This new area is bounded on the east by a wide street running north to south, and which is part of what we now call "*First Street*", of which other sections were discovered in previous seasons. The total area uncovered was something like 170,000 square feet, and was dug down to the level of the Late II Period.

The season's excavations join up with previous work, but between the two, and running from east to west, is an important thoroughfare which we have

named *"Central Street"*. (Plate XIX, and Plate XX, *c*.) This has an average width of 15 ft. except at its western end where it is some 20 ft. broad and bounded by buildings of very indifferent construction.

In the narrow strip of ground lying along and immediately south of Central Street, there are several buildings of interest. Unfortunately, here as elsewhere the search for building material by the people of the topmost strata of the mound has resulted in the partial demolition of these structures, and few indications of the doorways now remain. The northern side of a building of special interest in this area (Plate XIX, Block 8, IV) measures on the outside 87 ft. long by 83 ft. 4 ins. wide on the southern side. The other two dimensions are 38 ft. on the west and 48 ft. 10 ins. on the eastern side. The building is not, then, exactly rectangular, but its very thick walls which average 4 ft. in width shew it to have been, though small, a building of some importance. The walls shown in the plan (Plate XIX, Block 8, IV) belong to the Late II Period; they were raised in the Late I (*b*) Period at the end of which phase they fell into decay with the rest of the city.[1]

No antiquities were found in this building that give us any indication as to its use, but its design is so peculiar in many respects that there is reason to think that *it may have been a temple.* In the Late II Period the building was entered by the public from the east by a doorway measuring 5 ft. in width whose sill was —8·1 ft. below datum level.[2] This doorway gave access to a small antechamber, on the north of which was a small paved room containing a well which is described below. (Plate XIX, Block 8, IV, rooms 42, 43, 44.) The greater part of the comparatively thin wall which separated this antechamber (north of room 44) from the main hall, has been destroyed, and there is now no trace of a doorway, though it is certain that one must have existed. In the large main hall (nos. 32-40), which averages in size 62 ft. 10 ins. long by 31 ft. 4 ins. wide, square piers, averaging 4 ft. 2 ins. each side, are bonded into the outer walls. Two of these piers are found along the northern wall, one in the middle of the western wall, and two in the southern wall. (Plate XXI, *a* and *c*.) Some of these attached piers rest on slightly smaller piers of an earlier period. A broad footing along the northern side and along portions of the other three sides of the chamber marks the level of a pavement whose thickness is not known, but which lay approximately at a level of —8·2 ft. (Late II Period).

These square piers or pilasters may have served to support a heavy wooden roof around the sides of the greater part of the building in order to provide shelter from sun and rain. But their massiveness coupled with the thickness of the outer walls of the building lead me to think that this building had a second storey. If this were so, substantial piers would certainly have been necessary to support the very heavy beams required to span so wide a space.

As no trace of a stairway was found inside the building, it is possible that the upper floor was gained from outside by a wide stairway remains of which

[1] This building would seem to have been commenced in the Late III Period. The room marked 38 and the pavement west of it are of Late I date, and do not form part of its original plan.

[2] This entrance was blocked up in the Late I Period and is shown so in the plan.

have been traced against the western wall of the building at its northern end. This stairway is not shown in the plan owing to its present low level; it was found below chamber 95 of house XII, Block 9 in the plan.

The little chamber built up against the middle of the northern wall measures 10 ft. 6 ins. by 6 ft. 9 ins. (Plate XXI, *c*). It has a doorway 2 ft. 10 ins. wide towards the north and traces of another to the south, only 2 ft. 6 ins. wide.[1] This apartment was carefully paved at a level of —8·2 ft. At first sight this might be taken for another entrance to the building, but I am inclined to think that it was perhaps a shrine for a deity or some sacred object. The entrance on Central Street may at first be thought to militate against this theory, but it would certainly have been useful if the image of the deity ever took its part in sacred processions. That such processions did take place we have evidence from two amulets[2] found in previous seasons. If this small chamber was a shrine, this would account for the very narrow door at its southern end, which is a general feature of those modern Indian temple shrines that hold the figure of a deity. Nothing, I imagine, would be more natural than that the god or goddess should have been thought sometimes to go forth into the outer world in addition to being taken out in state on the occasion of religious festivals. This building is, I think, more like a temple than any building that we have yet excavated.

The well that we have referred to above would be, of course, a necessary adjunct to a temple, and it is situated where one would expect to find it, *viz.*, near the main entrance of the building (Plate XIX, Block 8, room 42). In the subsequent (Late I) period this well was entirely shut off from the main building; for what reason we do not know. Some human remains were discovered at the eastern end of this well-chamber and also in the street outside under exceptionally interesting circumstances. The well, which is 3 ft. 7 ins. in internal diameter, is carefully lined with wedge-shaped bricks measuring 11·5 ins. long by 5·3 ins. wide at one end, 3·5 ins. at the other, and 2·7 ins. thick. The coping of the well is at the level of —7·1 ft. and a neatly laid pavement surrounding it was some 6 ins. lower. The pavement and well can definitely be dated to the Late II Period, but during the next phase of the city a somewhat roughly built flight of steps was made in the eastern wall of this well-chamber, evidently owing to the rise in the levels of the city, in order to allow of its still being used without raising the steening of the well. While excavating this stairway we came across the remains of two bodies, one of which was moderately well preserved and lay crouched upon the stairs (Plate XXI, *e*).

The skull of the latter was badly crushed and was found facing north. The pelvis was on the step below and the vertebræ lay in position between the two. The left leg which was flexed and drawn up rested on the same step as the pelvis. The right leg was extended and hung down over the stairs. From the position of the bones, a young person, possibly a woman, seems to have fallen down and died while actually ascending the stairs. The remains of a second body lay

[1] The steps shown in the photograph in front of this doorway are modern.
[2] *Mohenjo-daro and the Indus Civilization*, pl. CXVIII, fig. 9.

at the foot of the stairs, but in this case the bones were so badly decayed that it was difficult to make out the original position of the body. The skull is seen in the photograph to lie on the bottom step between the bones of the legs, which suggests that the body had fallen down backwards. The remains of a third skull were found in the *débris* above the staircase, but there were no other bones with it.

In the street just outside this well-chamber is a sediment pit, measuring 2 ft. 8 ins. square and 4 ft. 8 ins. deep, with a paved floor. In this pit there were found the skull and remains of a body which must have been placed or fallen there when the pit was empty of *débris,* for some of the bones rested on the floor.

There seems no doubt that these four people were murdered, but who the murderers were it is quite impossible to say. It seems likely, moreover, that of the three killed inside the chamber, one found sufficient strength to crawl up the steps, but not to get out.

It can be taken as certain that these skeletal remains date from the latter end of the Indus Valley civilization and are not later intrusions. The fact that some of the bones of the lower skeletons rested on the brick pavement of the well-chamber, and that the remains found in the street outside lay in a sediment pit proves beyond any doubt that both well-chamber and pit were in use when the tragedy happened.

Here and there in the ruins of Mohenjo-daro we have been finding bricks of a very large size, averaging 22·6×11·6×3 ins. We surmized that they had served as drain covers, though we had never found them in position. That they were certainly made for this purpose is now proved in the case of a short section of drain unearthed this season in Block 8, room 50 on the plan a little south of the temple-like building that I have just described. The channel of this drain, measures 4·75 ins. wide by 10·25 ins. deep, and is most carefully covered with these large sized bricks. This drain presumably dates from the Late I Period, for the top of its channel is only a foot below a pavement whose level is —5 ft. below datum.

In the extensive area north of Central Street there is a large building (Plate XIX, Block 18), averaging 177 ft. long N.—S., by 116 ft. wide, E.—W., which probably belongs to the Late III Period. It is, however, so encumbered with later structures, most of which will have to be removed, that it is impossible properly to determine its plan and purpose until further work is done upon it. The best preserved of its outer walls, the one upon the west, is 5 ft. 9 ins. thick; that is, considerably thicker than the outer wall of the Great Bath building, in the SD Area,[1] which is the most important building hitherto found at Mohenjo-daro. The other three walls are not so thick as the western one; they vary from 3 ft. 6 ins. to 4 ft. 10 ins. in the southern wall. Possibly we shall find that the four walls of this building were once uniform in thickness, but that repairs in a later period led to three of them being narrowed down considerably.

[1] *Mohenjo-daro and the Indus Civilization,* p. 132. The walls are uniformly 4 ft. 5½ ins. thick.

No main entrance has yet been found to this building, though traces exist of a narrow doorway on the western side; but as this is only 3 ft. 7 ins. wide, it seems hardly adequate for so large a building, unless its nature rendered more than one door undesirable. On the other hand, partial destruction of the eastern and northern walls may have removed doorways on these two sides.

East of, and closely adjacent to this great building there is a small structure (Block 22), 56 ft., E.—W. by 51 ft., N.—S., whose outer walls average the considerable width of 3 ft. 9 ins. This building was perhaps once an annexe of its larger neighbour as there is only a small space left between the two. Like the larger building it appears to have had a secular rather than a religious use for there is no well. Two doorways that were blocked up at a later period in the southern side average 2 ft. 8 ins. wide.

The street along the western side of the larger building has for the sake of convenience been named West Street. It is approximately 14 ft. wide at the southern end (Plate XX, *a*) and 12 ft. at the north (Plate XX, *b* and *d*). On its western side there are several small, badly built houses, mostly of the Late I Period, whose foundations rest mainly on rubble. These houses yielded no less than four hoards of copper and bronze implements, vessels and other objects of household use and adornment, some of which are illustrated in Plate XXIII, nos. 13, 16-18 and Plate XXII, nos. 2 and 7. These very fortunate and valuable finds have produced more copper and bronze objects than have ever been found at Mohenjo-daro before.

It is difficult to say why these hoards should be confined to such a comparatively small area. As they were buried below the floors of houses, it seems that the owners intended to retrieve them later, but that they were unable to do so for some reason. The cooking vessels of a household would hardly be buried unless there were some immediate danger of their being looted by an invader; and even then there was always the probability that a search might be made for valuables buried beneath the floor of a house. I am inclined to think that the people to whom these buried articles belonged had sufficient warning of some impending trouble to bury their more valuable goods and chattels, but that they did not escape with their lives. Possibly, an enemy attacked Mohenjo-daro and it was left derelict for some appreciable time and after another very brief occupation (Late I (*a*)) it was finally deserted. If the trouble had lasted but a year or two, there would, I imagine, have been plenty of people only too willing to search beneath the floors of houses when their owners failed to return. In this connection it seems likely that the bodies found in the well-chamber, already referred to in this Report, which is not far from these houses, were perhaps those of victims of the same raids.

Lower Levels.

In March, 1931, when the water level in the soil had sunk conveniently low, we began an investigation of the lower levels of Mohenjo-daro, the site selected for this purpose being a fairly open space in an area that was excavated

last season down to the bottom of the Intermediate Period.[1] Somewhat to our surprise, we found that some of the platforms of sun-dried bricks, that had formed the foundations of later buildings, go down in places to a very considerable depth. We traced these mud-brick foundations down to as much as —28·8 ft. below datum, beneath which was some 10 ft. of *débris*. This layer of *débris* may be due to a temporary desertion of this part of the mound during which time it was apparently used as a quarry for bricks.

In the lower stages of this deep dig we came across walling here and there, all in a very bad state of preservation; indeed what was left of it indicated that a heavy toll of its bricks had been levied by brick-robbers.[2] (Plate XXI, *b*, *d* and *f*.) In the course of removing the bricks a few objects were left behind by the wreckers, such as broken weapons and tools, which were in an advanced state of corrosion when found. Between the levels —28·8 ft. and —35·5 ft. a number of pottery figurines of animals were found, the majority of which seem much too well made to have been the handiwork of children. They may have been votive offerings thrown out of some religious establishment in the vicinity that was destroyed, in the search for brick. Or they may have been children's playthings for the majority of them are badly broken.

It is of considerable interest that several pieces of pottery, both glazed and unglazed, from which the dark or light-coloured slips had been removed by means of a comb or other instrument—what has been termed "Reserved Slip Ware"—were found in these early levels, as were also the few pieces unearthed in previous seasons.[3] This method of decorating pottery is known in early Sumer: yet another of the many connections between the Indus Valley and that country.

At a depth of —33 ft. below datum, we uncovered the remains of a small structure constructed of unusually small-sized bricks, averaging 9·2×4·5×2·2 ins. (Plate XXI, *b*). As we have no evidence that these bricks were re-used from still earlier periods, we can form some more definite idea of the size of brick made at that period than in any later phase of the city, when the majority of the buildings included bricks of several sizes, some of which had been re-used from earlier strata.

At the level of this little structure is a great deal of stiff clay containing pockets of fine grey sand here and there which appears to have been deposited by a flood.

Environs of the City.

In the search for possible fortifications and city walls, early this season we cut a deep trench through an irregular mound situated about 100 yards beyond

[1] See *A. S. R.*, 1928-29. This digging was done beneath parts of Block 7.

[2] It is, of course, possible that there was no Civic control at this time.

[3] See *Mohenjo-daro and the Indus Civilization*, pl. CLIX, figs. 1 and 2.

According to an agreement reached at the Mesopotamian Conference at Baghdad on January 6th, 1930, concerning the use of technical terms to describe pottery in scientific publications, the term "Reserve Slip", equivalent to French "réserve d'engobe" and to German "unterbrochene Engobe" shall be used for pottery on which a slip does not entirely cover the ware: "für einen nicht vollendeten Tonüberzug".—*Editor.*

and slightly to the east of the point where the northern end of First Street debouches into the plain. The highest part of this mound is now 13 ft. below datum; and its extent just above the level of the plain is some 200 ft., E.—W., by 170 ft., N.—S., but it is, of course, much larger in area below the present level of the alluvium. It was found to consist solely of broken pottery, ashes and humus, and the latter seems to be the product of decaying vegetable matter; there were no traces of masonry except deep down near to water level.

This rubbish-heap, for it is nothing else, provides yet further evidence that the sanitation of the city was carefully looked after. Though it was not so far removed from the houses as to comply with modern requirements, the idea of removing rubbish was clearly acted upon; and, moreover, it is quite possible that if the dump had been situated further away, it would not have been properly used.

Several seals, copper tablets, rings and bangles were found in the course of digging this trench, which were, doubtless, accidentally dropped and lost; the trench has the additional value of fixing the northern limit of the city during the Intermediate Period when the latter was clearly at its zenith.

With a view to a more detailed exploration of the low ground outside the northern entrance of the city, I then had a number of trenches cut in a line at right angles to the periphery of the mound to a distance of well over 500 feet from it and passing across the previously cut trench in the rubbish-mound. In the course of this work we came across parts of buildings of good though now ruined masonry, but it was unfortunately impossible in all cases to ascertain the level of their foundations owing to water level being reached at a depth of —34·2 ft. In the limited view afforded by these trenches, we were unable to determine the purpose of these buildings, but quite clearly none of them had ever formed part of the walls or fortifications of the city. We did find, however, incontrovertible proof that this low ground outside the city was flooded on more than one occasion. In fact, the stratification of the soil in these trenches has proved illuminating. By it a considerable light has been thrown on the conditions of the buildings that have been explored layer by layer in the neighbouring mound and elsewhere in the city.

In the second trench, which is about 40 feet from the Dk mound, the stratification is as follows :—

(*a*) A band of decomposed brick, reddish in colour; from ground level (19 ft. below datum) to about 22 feet below datum, *i.e.*, some three feet thick in places.

(*b*) Sandy clay deposited by flood: about 2 feet thick.

(*c*) Decomposed brick; about 2 feet thick.

(*d*) A layer of rubbish (broken brick, potsherds, ashes and humus) not quite so deep. The bottom of this layer, however, declines towards the north at the rate of about 2 feet in 24 feet.

(*e*) A thick bed of stiff clay, roughly 6-7 feet in thickness above water-level, whose actual depth could not be ascertained owing to water-level being reached at a depth of 33·7 feet below datum level.

In this pit, then, we have distinct evidence of two floods, one of which occurred at the level of 24 feet below datum and the other much earlier still. As the ground outside the city must always have been considerably lower than the street levels, these floods would hardly have penetrated into the city itself. But that they seriously affected its buildings is proved by the subsidences that have been revealed by our excavations. The walls of the Intermediate III phase have in most cases sunk very badly, and that the mound was thoroughly saturated at that period by percolation is proved by the fact that even such comparatively light structures as pavements had collapsed. The average level of the pavements and door-sills of the Intermediate III Period is 20·4 ft. below datum, and if we allow 3 feet or more of foundations below this level, the layer of soil between them and the lower band of clay, whose upper surface averages 26 ft. below datum, is only slight, and it must have been completely water-logged.

After the re-occupation of the city, the large mound of rubbish referred to above has accumulated over a period of three phases of occupation.

The second flood which deposited a layer some two feet thick, we can perhaps correlate with the Late III phase, for during or just after this period the city seems to have been entirely deserted. When it was re-occupied, the type of house erected was very poor, and the art of building steadily deteriorated to the end of the period.

The most northerly pit shows similar strata, though there is no superficial layer of decomposed brick as the pit is 574 feet from the edge of the Dk mound. Here the ground level is 22·6 ft. below datum level and there is a band of water-laid, sandy clay down to 32 ft. below datum, which corresponds with the upper flood stratum of the southern pit. Below this lay a thick bed of clay containing numbers of potsherds; which suggests that water was still standing in this region when the city was re-occupied after the earlier flood and rubbish was first thrown out on the site of the future (*i.e.*, present) rubbish heap. What lies still further down at this spot, we could not ascertain, as water was reached at 34·2 ft. below datum.

Principal Objects found at Mohenjo-daro during 1930-31.

Plate XXII.

No. 1. (Dk. 12682.) A dirk. Copper. 18·5″ long by 2·39″ wide by 0·48″ thick near tang. Period: Late I (*b*). Level: —5·5′ below datum. Locus: Block 9, house VIII, room 53.

This formidable weapon is the second of its kind to be found at Mohenjo-daro, and is a much longer and finer specimen than the first (Plate XXIII, figs. 13 and 16). Its long tang and the rivet holes show that it is not a spear-head, for which it would also be too long. The double-edged blade is rhomboidal in section with a sharp mid-rib down each side. It is thickest where the blade joins the tang and fines down very gradually and evenly towards the point. There is a slight concavity in all four faces which may have been intentional so as to allow of easy sharpening. On the other hand, this slight

hollowing, which may be compared to a modern hollow-ground razor, may have been caused by the smith beating out the casting from the centre towards the edges. The tapering square-cut tang is 0·39″ thick near the blade and 0·18″ at the tip. The handle, which was probably of wood, was possibly made in two pieces that were kept in place by rivets and, perhaps, by a lashing also.

In general shape this weapon resembles one found in Egypt and dated to the time of Rameses II; that dirk was doubtless an importation, either from Cyprus or Syria. Another weapon of Cypriote origin, also found in Egypt, is not unlike the Mohenjo-daro specimen, except that it is slimmer and more rapier-like in type. This, like the Mohenjo-daro specimen, has a very sharp mid-rib.[1] No weapons of this description have yet come to light in ancient Sumer, nor can I find any record of their having been found at any later date in Mesopotamia.

I think the term "dirk" the most suitable for this weapon which is, after all, only a very elongated dagger. To term it a sword would suggest that it had only one edge, and "rapier" hardly meets the case, for the latter is a long and attenuated weapon.

No. 2. (Dk. 11337.) A saw. Copper. 16·6″ long by 4·48″ wide by 0·13″ thick at back and tang, and 0·05″ thick at edge. Period: Late II. Level: —7·1′. Locus: Block 15, house III, room 28.

This well preserved implement was found buried beneath the floor of a quite unimportant house, together with other tools and utensils of copper (Plate XXIII, no. 18). It is in shape not unlike saws of the Old Kingdom of Egypt, though much wider. It originally had a wooden handle secured by three rivets which were placed wide apart for the sake of strength. This handle embraced a considerable portion of the blade itself, as in the modern type of saw. The teeth are barely perceptible owing to corrosion, but enough remains of them to show that they were irregular, in fact, merely rough notches. This saw appears to have been used for cutting wood; except for 2·11″ from the tip, the edge was set first to one side and then to the other, in the same way as the teeth of a modern saw. The object of this was, of course, to prevent the blade from jamming in a cut. This setting was fairly regular and was, evidently, carefully done, there being an average distance of 0·72″ between the bends.

No saws have ever been found in Sumer, as far as I am aware, with which this object can be compared. The only shapes with which it is comparable are those of early Egypt. Petrie has remarked that, except in Roman times, no ancient saw is known with set or splayed teeth[2]; this specimen is, therefore, the first of its kind to be found.[3]

The actual edge of this implement is 0·05″ thick, and, taking the setting into account, the width of the cut would have been 0·15″ or more likely less, since the thickness added to the blade by corrosion must be taken into account.

[1] Petrie:—*Tools and Weapons*, Plate XXXIV, figs. 39-41.

[2] *Tools and Weapons*, p. 44, Plate L.

[3] The scarcity of copper saws may be ascribed to two probable causes, *viz.* (1) that whenever a copper object became worn out, it could be re-melted and forged again, and (2) that stone saws were excellent and much cheaper implements. When the Editor accompanied Sir Aurel Stein on an expedition to Iranian Baluchistan (1932) he once used a 5,000 year old stone knife and succeeded in cutting the branch of a tree, about 3½ inches thick, within three minutes.—*Editor.*

No. 3. (Dk. 12728.) Figure of a dancing girl. Bronze. Height: 5·2″, including tang at feet. Period: Late II. Level: —8·6′. Locus: Block 9, house X, room 81.

That this figure is cast in bronze must be regarded as certain, and, judging from its weight, it is perhaps solid metal and was not made by the wax process.

It is the same type of figure as the one found in the Hr. Area in 1927.[1] Unfortunately, it is nothing like so well preserved owing to the exceptionally salty ground in which it lay.

It will be noticed that the two figures are differently posed. In the present figure it is the left hand instead of the right that rests on the hip, and the other hand, which in both statuettes held some object that is now missing, is in this figure held somewhat higher. The legs which are close together are as long and attenuated as in the Hr. figure. In place of the elaborate arrangement of hair of the latter figure, here it is simply tied at the nape of the neck with a neat bow whose broad ends project stiffly on either side. The left arm is covered with many bangles as is the right arm of the Hr. figure; there are only one or two on the other arm. There is no necklace but there are indications of two anklets on each leg. From the presence of a broken tang below the feet it is evident that this little figure was set up on a stand. Despite the damage by corrosion it is clear that in workmanship and finish this later figure is inferior to that found earlier.

No. 4. (Dk. 9404.) Theriomorphic vase. Pottery. 5·35″ long. Period: Early II. Level: —24′. Locus: Dk Area (G Section), Southern portion, Early trial pits.

This vase which represents a ram *couchant* is the first of its kind found at Mohenjo-daro. The modelling of the head is good but the fore and hind-legs are roughly fashioned. The body is entirely hollow and there is a slightly rimmed aperture in the middle of the back, 0·62″ in diameter. The eye on the side shown in the photograph once held an oval pellet to represent the pupil; this pellet is present on the other side. The ware is light red in colour, coated with a cream slip.

Theriomorphic vessels are known, and especially in stone, in the early periods in most ancient civilizations; but representations of sheep are of rare occurrence, and I can only trace two. One is a model of an ewe from one of the Ægean islands that is now in the Ashmolean Museum, Oxford.[2] The other, an arragonite vase from Ur in the shape of a ram, is dated to about the 7th century B.C.[3]

Sir Arthur EVANS has elaborated the ingenious suggestion that some at least of these theriomorphic vessels may have been used as inkstands.[4] This

[1] *Mohenjo-daro, etc.*, Plate XCIV, figs. 6-8.

That figurine proved to be of bronze, but neither R. B. S. R. SAHNI (pp. 209 f.) nor Sir John MARSHALL (pp. 44 f.) tell us whether it was made by the *cire perdue* process.—*Editor.*

[2] FRANKFORT:—*Studies in Early Pottery*, Part I, Plate IX, fig. 4.

[3] GLANVILLE:—*Egyptian Theriomorphic Vases in the British Museum.* In *Journ. Eg. Arch.*, vol. xii, p. 66, Note 5.

[4] *Palace of Minos*, vol. III, pp. 422-426.

is not at all impossible and the specimen from Mohenjo-daro could well have been used for this purpose. It certainly would have held plenty of ink, but there may have been a pad inside to prevent undue evaporation, as in many inkpots of the east. True, there are no ink stains to be seen on our example, but ancient ink had not the staining properties of modern ink and is readily soluble even when it has dried.[1]

No. 5. (Dk. 12431.) Head of a bull. Pottery, 3·68″ long by 2·3″ high. Period: Late II. Level: —9·1 ft. Locus: Block 8. house II, room 48.

This powerfully modelled head of a bull which has a curiously modern look about it, was possibly used for ritual purposes; for a slightly conical hole in its base, 1·39″ deep by an average of 0·65″ in diameter shows that it was mounted on something, possibly a sort of standard.[2] It could conceivably have had an architectural use, but if so employed, the head of the animal would have pointed downwards. It was found in quite an ordinary room. The horns and ears are missing; but there is evidence that they were inserted in holes made for them and were possibly made of some other material. The eyes are represented by round pellets of clay inserted in two narrow cuts, and roughly scored lines indicate the wrinkles in the skin above the eyes. Light red clay, once covered by a thick red slip.

No. 6. (Dk. 10721.) Animal figure. Pottery. 2·41″ high. Period: Late I(*a*). Level: —3·2′. Locus: Block 8, house III, room 30.

A number of heads similar to that illustrated have been found at various times without the bodies, and they have been thought to represent a fabulous beast. We have now, however, found this practically complete figure. Though the roughness of make suggests it to be the work of a child, the modelling shows a careful observance of nature; the hind legs are arranged in a position that is typical of many animals when resting. That the animal is a dog, must be regarded, I think, as probable, in spite of the enormous mouth and very obvious beard. The former feature would naturally be exaggerated by a child. To make the realism complete, the animal is represented with both forepaws clasping a bone.[3]

No. 7. (Dk. 10781.) Figure of a goat. Bronze. 2·18″ long by 2·12″ high including tang. Period: Late I(*b*). Level: —4·8′. Locus: Block 14, house III, room 19.

The unusually good state of preservation of this figure of a goat is due to its having been protected by the copper vessel in which it was buried with other small objects of value to the owner. The animal, which is in a lying position, is tied to a post by a strip of cloth round the neck, just as are several

[1] Such a generalization on "ancient ink" is somewhat far-reaching. There must have been many kinds of ink in many countries, and, to mention only one instance, Egyptian ink has proved to stand the ravages of many thousands of years. —*Editor.*

[2] Perhaps in a similar manner to the ram's head in steatite, found in a small shrine at Ur. Cp. *Illustr. London News*, March 21st, 1931, p. 455, fig. 1.

[3] That the animal is intended to represent a dog, is not quite so evident to the Editor. Any animal of prey may be characterized by a bone, and neither the head, nor the body of this figurine are typical of a dog. The surmise that it was made by a child is strongly contradicted by the clever modelling of the body. See also my note under object no. 8 of the same plate.—*Editor.*

pottery models of dogs. The short upturned tail and long spirally curved lateral horns show the figure to be a goat. That this figure was originally fixed to a stand is proved by the 0·7″ long tang beneath it. There are traces of a beard under the muzzle. Unfortunately, one of the front legs was bent in ancient times and cannot be straightened owing to the brittleness of the metal. As the eye cavities are very deep, it is possible that some other material was once inlaid.

The modelling of this little figure is excellent; it was probably made by the *cire perdue* process, though nothing definite can be said without further examination. We may have in this figure a copy of a pet or an animal prepared for sacrifice. If it was for the latter purpose, we can visualize a setting where it was affixed to a stand before the figure of a god. It should be pointed out, however, that the goat itself seems to have been regarded as a sacred animal by the Indus Valley people, for it is represented on one seal at least with a human face and forming part of a seal apparently associated with a tree spirit.[1]

No. 8. (Dk. 12041.) Seated figure. Pottery. 4·2″ high. Period: Late II. Level: —8·7′. Locus: Block 18, room 31.

This unusual, but roughly modelled figure of a man is again possibly the work of a child. Though, unfortunately, the top of the head is missing, enough remains to show that the hair was gathered in a knot behind and secured by a narrow fillet round the forehead. The beard is very prominent and curled inwards at the end. We already have a figure from Mohenjo-daro with a similar beard, but this is a better specimen. The appendage calls to mind the beards worn by the monarchs of ancient Egypt, except that in their case the end of the beard curls up outwards instead of inwards. As is usual with the pottery figures of males found at Mohenjo-daro, the body is nude save for a collar loosely tied around the neck with the ends hanging down in front.[2]

The eyes, which are merely added pellets of clay, slope considerably, but in the reverse direction from the Mongolian slant, as is the case in some of the stone heads found in previous seasons. An attempt was made to fashion the ears by adding a piece of clay to represent the lobe beneath a small hole for the ear. The two holes for the nostrils themselves are an unusual feature and add expression. This figure may represent a deity, and if so, it was perhaps made by an unskilled adult rather than by a child. The clay of which this figure is made is light red in colour, and the figure itself would seem to have formerly been washed over with a red paint.

No. 9. (Dk. 13013.) A mask. Pottery. 2·98″ high. Period: Late III. Level: —9·7′. Locus: First Street, portion 28.

That this head is a deity is shown by its two horns. Unfortunately, the greater part of the latter are missing, but from what remains they seem to have been the horns of a bull. The face which was moulded is very powerful and

[1] *Mohenjo-daro, etc.*, Plate XII, fig. 18.

[2] *Mohenjo-daro, etc.*, cp. with Plate XCIV, fig. 11.

To the Editor it seems that far too many objects in pre-historic sites are ascribed to children. I have no doubt in my own mind that most, if not all, the objects described as made by children are really the works of simple artizans (perhaps *for* children). Such and even more "primitive" images play a very considerable *rôle* in present-day popular religion in India, and are produced by peasants and simple potters (often also in *papier mâché*), but never by children.—*Editor.*

possesses much dignity. A very short tufted beard adds expression to the face and is, moreover, of especial interest in that it suggests that the other bearded figures which we have found, even though hornless, may also be figures of deities.[1]

This mask is hollow behind, and just below the horns there are two holes for fastening it to some support. The ears are missing. The eyes are almond-shaped and set horizontally; the nose is well formed and broad, with nostrils represented by two shallow holes. The lips are full and remind us of the steatite head found in a previous season.[2] This mask is of light red ware and was once washed over with a dark chocolate-coloured slip, of which there remain indications here and there.

It is to be noticed that there is nothing repellant about this face; this may indicate that the deity whom it represented was benign in character with attributes perhaps like the very similar horned figures that have been found in early sites in Sumer.[3]

No. 10. (Dk. 12485.) Polychrome vase. Pottery. Period: Late III. Level: —8·8′. Locus: Block 6, house IV, room 43.

This wheel-turned vessel is made of light red clay covered, except for the recessed neck, with a thick white slip which was carefully polished. The neck and the rim were coated with a black paint of which a good deal remains. Originally this vessel was decorated with a design in red, black, and possibly green, though no indication of this last colour remains. This design was apparently made up of geometrically arranged red, petal-like motifs edged with black.[4] But all that is left of it is a few patches of black and red paint inside and outside the hollow foot.

This is the first vessel of this shape that we have found at Mohenjo-daro. The very narrow aperture, only 0·35″ in diameter suggests that it served to hold either some liquid or a fine powder probably used as a cosmetic. Unfortunately, it was found quite empty and there are no stains to give us any inkling as to its former contents.

Plate XXIII.

No. 1. (Dk. 11794.) Impression of seal. Dark coloured steatite. 1·36″ square. Period: Late I (*b*). Level: —5·6′. Locus: Block 13, house III, room 13.

A most interesting seal portraying a deity or hero of very muscular appearance gripping two tigers by the throat, one on each side. The figure is nude, except for a very brief cincture around the loins,[5] and is represented with head in profile and apparently with the tongue hanging out.[6] Either a helmet is

[1] *Mohenjo-daro, etc.*, Plate XCV, 9.

[2] *Ibid.*, Plate XCVIII.

[3] The Author mentioned the bearded monarchs of Egypt in connexion with fig. 8, *suprà*. It seems to me that the similarity is much more marked in the present head; the beard here is remarkably reminiscent of Egyptian sculptures, and the longish head and especially the mouth are very Egyptian in character.—*Editor.*

[4] Perhaps comparable to the design on the painted jar in *Mohenjo-daro, etc.*, Plate LXXXVII, fig. 2.

[5] I suggest that what the Author describes as a "brief cincture" is in reality a *penis erectus*, the *ūrdhvalinga* of Sanskrit iconography. The male member can clearly be discerned in the next seal, fig. 2 of the same plate.—*Editor.*

[6] I have examined this head very carefully and think that the apparent tongue is due merely to a break in the stone and was not intentionally cut. In Indian art, however, deities are sometimes represented with protruding tongues to indicate fierceness or rage. But this feature seems to be confined exclusively to goddesses.

This last remark of the Author is not quite right. Yama and *rākshasas* are often shown with protruding tongues; even Vishṇu in one of his *avatāras*.—*Editor.*

worn with knobs behind or a peculiar arrangement of the hair is depicted. The tigers are shown with claws and open mouths.

As is customary, the inscription above this scene appears to have no reference to it, for on another seal (Dk. 11373), on which there is a very similar scene, the inscription is completely different.

This figure strikingly recalls a scene on the ivory knife-handle from Gebel-el-'Arak showing a dressed figure at grips with two lions.[1] There can be no doubt that this seal from Mohenjo-daro shows Sumerian or Elamite influence, but in order to bring it into agreement with the Indian fauna, tigers have been substituted for lions.[2] The nude figure itself is not unlike certain figures of Gilgamesh and it is conceivable that the knobs at the back of the head are copies of the usual coiled locks of that deity.

No. 2. (Dk. 12050). Impression of seal. Steatite. 1·09×1·06×0·34". Period: Late II or III. Level: −8·4'. Locus: Block 15, house I, room 5.

We have now found three seals with this peculiar figure seated on a dais. Sir John MARSHALL has pointed out in his description of the best example,[3] that it represents a figure of Śiva seated in the *yogī* attitude with the soles of the feet together. This new seal, however, shows certain details clearly. For instance, the legs of the dais upon which the god is seated represent those of a bull,[4] and the spike at the top of the head appears to be a twig of the pipal tree. The horns worn by the god on the other two seals appear in this case to be replaced by something else, for, whatever they may be, they are definitely separated from the head and arė, moreover, fastened to the base of the twig. The figure is represented with either three or four faces as on the first seal of this type that we found.

No. 3. (Dk. 12688). Impression of seal. Steatite. 1·36×1·39×0·38". Period: Late I (*a*). Level: —3·9'. Locus: Block 18, room 107.

This seal represents a combination of the usual unicorn-like animal with two other heads, those of an antelope and of a short-horned bull. The inscription on this seal is unusually long; it would apparently have been written from right to left. The arrangement of the two extra heads suggests that they were cut as an afterthought, and if this were so, the lower line of inscription may have been added at the same time.[5]

No. 4. (Dk. 12245.) Impression of fragment of a very large seal. Steatite. Present length 1·4". Period: Late III. Level: —9·2'. Locus: Block 12, house I, room 1.

Only a portion of this seal was found, but that one is one of the most realistic animal representations that we have come across at Mohenjo-daro. It is a tiger portrayed with open mouth and protruding tongue, as is the lion in Syrian and other Asiatic art in contrast with that of Egypt where the animal is always much

[1] MORGAN:—*La préhistoire orientale.* T. II, p. 283, fig. 326.—*Ancient Egypt*, 1917, p. 29.

[2] There is an erroneous surmise in this argument, for lions were very common in India and they certainly appear much more often in Indian art than tigers. It is only in the last few hundred years that lions have become almost extinct.—*Editor.*

[3] *Mohenjo-daro, etc.*, p. 52.

[4] Like the furniture of Egypt dating from very early times.

[5] For a similar device on a seal see *Mohenjo-daro, etc.*, Plate CXII, 382.

less ferocious in appearance. The broad stripes of the animal's body are cleverly suggested by double wavy lines which are broken at intervals.

It is possible that there is what is perhaps a representation of a collar round the animal's neck, but it is conceivable that the seal-cutter has merely intended to show loose folds of skin. Though perhaps a collar would be out of place on a tiger, it is certain that this animal was sometimes kept in captivity, for there are other seals on which a tiger is represented with a food-trough before it.

No. 5. (Dk. 10942). Compound bead. Shell and pink-limestone. 1·08″ in diameter by 0·31″ thick. Period: Late II. Level: —7·4′. Locus: Block 18, room 17.

This is a very unusual bead, being made in two pieces, and the first of its kind found at Mohenjo-daro. The stone portion, which is 0·2″ thick, has a carefully made groove, 0·1″ wide, on the flat side. The shell plate is 0·11″ thick and has no groove. The limestone portion of the bead appears to be unfinished as it still shows marks of the abrasive used to shape it, but the piece of shell is highly polished. There is now no trace of cement, and as the two portions were found apart, though in the same room, there is reason to think that they were never stuck together. Possibly the final polish would have been given after this was done.

I do not know of any examples of compound beads other than this one, save a specimen of late date found by CAMPBELL THOMPSON at Nineveh and described by BECK as having "a white agate back plate, on to which is cemented an obsidian front, so as to represent one of the typical onyx eye beads".[1] That our specimen from Mohenjo-daro was also intended to simulate an onyx bead seems evident.

Nos. 6 and 7. (Dk. 10237). Enlarged photograph of amulet. Pottery. 1·52×0·45×0·27″. Period: Late I (*a*). Level: —2·2′. Locus: Block 15, house II, room 12.

This amulet is a thin rectangular plaque which has been twisted slightly but purposely[2] to an angle of little under 10°. The scenes depicted on it are unusually clear and do not present a rubbed appearance as is generally the case.

On one side, reading from the left, there is an intertwining pattern that has already been seen, though somewhat indistinctly, on another amulet. Devices of this kind are not so common at Mohenjo-daro as in ancient Sumer, but their occurrence here provides another link, whether through trade or otherwise, with Babylonia and is of special interest on this account.[3]

Further to the right there is a group of pictographs each of which is frequently seen on the seals. To the right again a devotee kneels before what is probably a sacred tree, holding in his hands a tong-like object which has not yet been identified. Since this same object appears in the group of pictographs, we can reasonably infer that it is an ideogram rather than a phonetic symbol. Unfortunately,

[1] *Archæologia*, vol. 79 (1929), p. 143.

[2] This twisting is quite a common feature of the Mohenjo-daro amulets, though the reason for it is not apparent.

[3] The motif is doubtless a religious one or, it is perhaps more correct to say, magical one.

To the above remark of the Author I would like to add that "magical" and symbolical diagrams of a kind are well known to Indian religion in the form of *yantras*.—*Editor.*

it is not possible definitely to identify the tree; it is evidently not the pipal, since wherever the pipal tree is portrayed on the seals, its leaves are always carefully delineated.[1]

The reverse of this amulet (fig. 7) is even more interesting than the obverse. On the left a man is seated in a tree just above a disproportionately large figure of a cat-like animal, probably a tiger, which appears so frequently on the seals. This particular seal is now well known to us; several examples have been found on seals from Mohenjo-daro.[2] Hitherto, it has been thought to be an attempt at humour, but taken into connection with the obviously religious subject to its right, it may be an allegory of which we have yet to find the meaning. It should be noted that in the arrangement of its branches the tree in which the man is seated is quite different from the tree on the obverse, though there is some similarity between their leaves.

On the right of this animal is what appears to be a pictograph of a form unknown hitherto upon the seals. This sign has a striking resemblance to a type of vessel found at Mohenjo-daro in either silver, copper or pottery, and frequently provided with a conical lid.[3]

The scene to the right might represent the marriage of two trees presided over by a tree deity. The marriage of one tree to another is, of course, well known in India at the present day; and it is undoubtedly a rite that comes down from very early times. The fact that the young trees carried by the two men seem to be of different species lends support to this explanation. The tree on the left resembles that on the obverse of the amulet, whereas the tree on the right is very like the one in which the man is seated.

An alternative explanation of this scene is that the two men have torn a tree asunder as well as *plucking it up by the roots.* The central figure, if that be so, may represent a tree deity or spirit, which has been released from confinement in the tree. This figure is either wearing a number of bracelets on each arm or an attempt is made to represent a figure with branches for arms.[4]

A comparison may, perhaps, be made between this scene and the tale of Nalakūbara and Maṇigrīva, sons of Kubera, who, according to the *Bhāgavata*, had been metamorphosed through a curse of Nārada into two *arjuna* trees, and were finally liberated by Kṛishṇa when he pulled these trees down.[5] This legend may possibly be a survival of a much older one.

A few days later we found another amulet from the same mould, but at a considerable distance from the first. This last specimen has a twist of a little under 45°.

[1] I would suggest the *neem* tree (*Azadirachta Indica*, or *Melia azadirachta*).

[2] *Mohenjo-daro etc.*, Plate CXI, 353 and 355.

[3] *Ibid.*, Plate CXLVIII, *b*.

[4] Though the last suggestion is a tempting one, I think bracelets are indicated.

It seems to have escaped the Author's notice that the seated figure in fig. 2, Plate XXIII, has also these kind of arms. It is evident to me that a tree-spirit is indicated by this symbolism, especially as that seated figure also *wears a tree branch for a crown.—Editor.*

[5] WILSON:—*The Vishnu Purána*, vol. IV, p. 281, n. i.—This act of Kṛishṇa, which is by no means commonly pictured, may be seen on a stone slab found by Mr K. N. DIKSHIT at Paharpur and dated to the 8th century, A.D. or thereabouts. *A. S. R.*, 1926-27, Plate XXXII, (*b*).

Nos. 8 and 9. (Dk. 11583). Rectangular amulet. Pottery. 1·45×0·54×0·45″. Period: Late I (*b*). Level: —3·9′. Locus: Block 16, house II, room 13.

On one of the narrow sides of this amulet there is a scene that is entirely new to us, but owing to rubbing it is unfortunately not very clear. The illustration is an enlargement, and no. 9 shows an eye-copy in black-and-white drawing.

At the extreme left there is a tree from whose spreading branches hang fruit, or offerings, or water-bags, or possibly weaver-birds' nests. On either side of the trunk is a long-horned goat reaching up to eat the leaves. In the middle are two human figures. One, a male, is seated and holds with both hands what appears to be a plant or young tree. The other figure is that of a woman bending down to lift what may be a basket. At the right is possibly another figure accompanied by a vessel(?) the base of which is not unlike that depicted on no. 7 of the same plate; but, owing to the rubbed condition of the amulet, it is impossible to be certain of this. It is to be hoped that we shall find a duplicate of this amulet in which these most interesting details are better preserved, for possibly we have here an agrarian scene.[1]

On one of the broader faces there is a row of animals facing to the right, a rhinoceros, an elephant, and the so-called 'unicorn', reading from left to right. On the reverse, a cat-like animal looks round at a man seated in a tree behind him, and there are also five pictographs which are no doubt explanatory of what has become at Mohenjo-daro a very well-known subject.

No. 10. (Dk. 12769). Small toothed comb. Ivory. 1·11″ wide and 0·35″ thick. Period: Late II. Level: —8·0′. Locus: Block 9, house VIII, room 46.

This V-shaped comb of very unusual pattern must have been used either for combing the hair, lock by lock, to free it of vermin, or perhaps, like the modern hair-slide, for fastening a single lock in place. It is beautifully made, but unfortunately a portion is missing from the reverse. Like the back of the comb, the teeth also form a V-shaped edge. They were very carefully cut with a saw, and the roundness of their angles indicates considerable use. I do not know of a comb of exactly this shape from any other country, but one found at Badari in Egypt which may, perhaps, be compared with it.[2]

No. 11. (Dk. 9605). Irregular fragment of rim of stone vessel. Steatite. 1·98×1·5×0·25″. Period: Early III. Level: —28·1′. Locus: Dk Area (G Section), southern portion, deep trial pits.

This very important fragment of greyish-blue steatite was found on one of the lower levels of the Early Period in the Dk Area. (Plate XXI, *f*). The vessel of which it formed a part was evidently very carefully made and as the fragment will show was decorated with a basket-work pattern in incised relief.

Steatite of this particular colour is very rarely found at Mohenjo-daro, but it is fairly common in ancient Sumer. On this account it is a reasonable supposition that the Mohenjo-daro vessel was an importation from that country or Elam.

[1] I suggest that here, as in numerous other seals and amulets, is again a scene of Tree Spirit worship. The reverse, as the Author says, shows the now well-known (legendary) scene of 'The Tiger and the Tree Spirit'; consequently it is very likely that figs. 8-9 show an offering (of cereals?) before a Sacred Tree. The personage in the long robe is probably a king or a priest, depositing a donation before the Spirit who is shown kneeling, as usual, before the tree.—*Editor.*

[2] BRUNTON and CATON-THOMPSON:—*Badarian Civilization*, Plate XXIV, fig. 4.

This belief is greatly strengthened by the existence of a double vase of steatite which was found at a very early level at Susa and is now in the Louvre.[1] The outside of one of the compartments of that vase is decorated with *exactly* the same pattern (and an unusual one) as the sherd from Mohenjo-daro. It is quite possible that the latter fragment, though not enough remains to prove it, once formed part of a similar vessel to the one from Susa; its estimated outside diameter is 2·85″. This object, insignificant as it first appears, approaches some of the seals in value as a proof of a trading relationship between Sumer and Sind.

No. 12. (Dk. 10144). Portion of a measuring rod or scale. Shell. 2·62×0·62 ×0·27″. Period: Late I (*b*). Level: —3·6′. Locus: Block 18, room 46.

We are well acquainted with the system of weights in use at Mohenjo-daro, which was similar to that of Sumer; but this scale is the first to be found at Mohenjo-daro or Harappa, and shows many unique features. The material of which it is made, namely shell, is probably the best that could have been used, as it was not liable to warping or cracking.

There are nine definite divisions still left, but how many there were in the unbroken rule we cannot say; it is likely that they were a multiple of five. Each division averages 0·264″. The decimal system seems to have been employed, for the complete rod appears to have been separated by circular markings into groups of ten divisions which were halved into sub-groups of five. This scale is beautifully made and finished, and the division lines are, on the whole, very carefully cut with a thin saw. The kerfs average 0·02″ wide and deep.

A cast of this measure was sent to Professor Sir William Flinders PETRIE for further examination whose report is as follows:—

"The cast was measured along both sides by an ivory scale, divided to ·02, estimated to ·001 inch.

The weighted average length of one space is ·264 in.

The mean error of graduation is ·003 in.

The marks ⊙ and ⊛ being 5 divisions apart show a decimal scale of $\frac{1\cdot320}{\pm\ 5}$ (probably rising to $\frac{13\cdot20}{\pm\ 5}$) ins.

This is 1/10 of the northern foot of	13·20	ins.
In Egypt by rod measures, XIIth Dynasty	13·2	,,
In Egypt by a standard slab, Ptolemaic	13·4	,,
Buildings in Asia Minor	13·3	,,
Buildings in Greece	13·3	,,
Buildings in Roman Africa	13·4	,,
By Silbury Hill (neolithic ?)	13·0	,,
Belgic foot adopted in Roman lands	13·1	,,
British land measure (chain, furlong, old mile)	13·2	,,
British mediæval builder's foot	13·2	,,
French architects'	13·0	,,

This seems to be a unit of northern origin[2], and it is of great interest linking it with early India.

15 May, 1931. Flinders PETRIE."

[1] CONTENAU:—*Manuel d'archéologie orientale*, vol. I, p. 276, fig. 169.

Several steatite vessels, both dark grey and bluish grey, or fragments of such, have been excavated by me for Sir Aurel STEIN in Iranian Baluchistan (at Bampur, Khurab *etc.*), some with exactly the same pattern again.—*Editor.*

[2] To the Editor it is not quite clear why a northern origin should be surmised when not a single one of the above mentioned measures enumerated by Sir Flinders PETRIE is of as great an antiquity as the Mohenjo-daro scale. Even the oldest one among them, that of the XIIth Dynasty of Egypt (Middle Kingdom), is not older than *c.* 2212—2000 B.C., whilst the rest are considerably later.—*Editor.*

No. 14. (Dk. 10021). Amulet. Shell. 1·1″ long by 0·19″ thick. Period: Late I (*a*). Level: —2·6′. Locus: West Street.

This curious ornament is perforated with two holes which suggest that it was sewn to the clothing. It is most carefully finished. Of particular interest is the knot at the top. On account of this knot I regard this object as an amulet which was sewn to the clothing of its owner in order to prevent possible loss. In many ancient as well as in modern countries the knot is regarded as a charm. FRASER says that "its influence is maleficent or beneficent according as the thing it impedes or hinders is good or evil".[1] In some countries, as for instance in Egypt, knots were avoided as much as possible[2] whereas in others, *e.g.*, Assyria[3] and evidently in the Indus Valley, the tying of knots was a favourite charm. A knot worn on the person, as this amulet evidently was, was doubtless regarded as efficacious in warding off the evil; being cut in shell, moreover, it was a permanent charm as it could never be untied.

No. 15. (Dk. 10355-6). Enlarged impression of seal. Steatite. 1·35 ×0·66 ×0·39″. Period: Late I (*b*). Level: —4·4′. Locus: Block 21, house II, room 7.

This seal, part of whose back is broken away, was found in two pieces. It is rectangular in shape, and the incomplete motif on the back consists of roughly scratched lines that cross one another. The face is nearly complete and clearly bears a representation of a boat; the first of its kind to be found on a seal from Mohenjo-daro, or, indeed, on any other material in the Indus Valley sites. Why representations of boats are so rare it is difficult to explain, as it is more than probable that the river Indus was largely used for traffic of all kinds.

The vessel portrayed on the seal is boldly but roughly cut with a triangular burin, and is evidently not the work of an experienced seal-cutter; hence it is not a stereotyped engraving. The boat has a sharply upturned prow and stern, a feature which is present in nearly all archaic representations of boats; for example, this type of boat appears on Early Minoan seals,[4] on predynastic pottery of Egypt,[5] and on the cylinder seals of Sumer.[6] In the last country this type of boat extended down to Assyrian times. On the ivory knife-handle of Gebel-el-'Arak in the Louvre are depicted boats which bear the closest resemblance to the one on this seal, and these and the other seals on this handle are indeed explained by PETRIE as not Egyptian, but "the product of an Oriental people inspired by Elam and the Tigris region".[7]

It will be noticed that this boat is shown as lashed together at both bow and stern, indicating perhaps that it was made of reed like the primitive boats of Egypt and the boats that were used in the swamps of southern Babylonia. The house or shrine in its centre also appears to be of reed, and fastened at each

[1] *Taboo and the Perils of the Soul*, p. 310.

[2] *Knots*, by M. A. MURRAY, in *Ancient Egypt*, 1922, pp. 14-19.

[3] CAMPBELL THOMPSON:—*Assyrian Medical Texts*.

[4] HALL:—*Civilization of the Bronze Age of Greece*, pp. 35, 39.

[5] PETRIE:—*Prehistoric Egypt*, Plates XIX, XX, XXII, *etc.*

[6] WARD:—*Seal Cylinders of Western Asia*, pp. 40-42.—DELAPORTE:—*Catalogue des cylindres*, T. II, Plate 70, figs. 2 and 5.—It should be remembered that high prows and sterns are necessary in a river with shallow banks and seas with shelving shores.

[7] *Ancient Egypt*, 1927, pp. 27 and 30.

end of it is apparently a standard bearing an emblem which may be compared with the ensigns on the Gebel-el-'Arak handle.[1] At one end of the boat on the Mohenjo-daro seal a steersman whose head is unfortunately missing is seated at a rudder or steering oar. The seal-cutter here was not at all sure of his figure and placed it well above the seat.

The absence of a mast suggests that this boat was used only for river traffic, as are some of the wooden boats that ply on the Indus at the present day. The latter also have a less acutely upturned prow and stern but generally have a cabin-like erection in the middle, sometimes constructed of wood and sometimes of reed. These modern boats which are largely used for fishing are either rowed or punted against stream.

This seal is invaluable for indicating a type of vessel that was in use in ancient Sind.

Excavations during November 1931.

On reference to the site plan of Mohenjo-daro in *Mohenjo-daro and the Indus Civilization*, a chain of small mounds will be seen immediately north of Site No. 3 of the Stūpa Mound. These mounds it was thought for long might possibly be the remains of a city wall. With this surmise the clearance of this supposed wall was begun on the 3rd of November, 1931, with four gangs of men; but owing to notice of the measures to be taken to meet the adverse financial conditions the operations had to be stopped on the afternoon of November 6th, 1931, before more than some preliminary top clearance had been done. Consequently, no plan or photographs of this work could be made. Even so, what little came to light indicates that further excavations would reveal much of interest. There certainly appears to be an unusually thick wall running north to south, penetrated by a narrow E.—W. gateway which takes two turns in its passage through the structure, a feature to be expected in a fortified wall. Naturally, the objects found in so short an excavation were not many. A fine knife of the same pattern as that illustrated in the *Annual Report* for 1926-27, Plate XXII, No. 5, lay close to the wall and also what appears to be part of the rim of a small lapis-lazuli jar, of a beautiful uniform dark blue.

Trial Excavations in April 1932.

At the end of April 1932, when the sub-soil water at Mohenjo-daro was at its lowest, I asked Mr K. N. Puri, the Custodian at Mohenjo-daro, to dig a trial trench to the lowest possible level in the interior of our excavations in the Dk Area. The new trench measured nearly 18′×14′ in area, and was carried down to a depth of 45′ 3″ from the top of the mound. Three courses of sun-dried bricks were unearthed at one side of this pit at the level —37·4′, but owing to the dampness of the soil it was impossible to separate the bricks for examination and measurement. At a depth of —41′ a layer of potsherds was found, most of which are without any interest. In the layer immediately above water-level

[1] *Ibid.*, p. 28, fig. 3. Very much the same kind of ensign is seen on the boats portrayed on the predynastic pottery of Egypt.

there were found traces of charcoal and ashes. The level of the seepage-water recorded on the morning of May 10th, after it had been allowed to accumulate during the night, was —42′ below datum.

On the whole, nothing found in this trial trench suggests any break in cultural continuity between the Early and Intermediate Periods at Mohenjo-daro, though digging on a more extensive scale might conceivably do so. It is, at all events, certain that the buildings of this site extend as far down as 42′ below the datum level. Moreover, the objects found at these very low levels do not differ materially in character from those found in the strata above them.

Especially noticeable is the number of small pottery cones that were found. There were 35 in all, most of them coated with a chocolate-coloured paint and of the types illustrated in plate CXXXIV, figs. 13-16, of *Mohenjo-daro and the Indus Civilization.* These cones were found associated with a number of pottery balls of small but varying sizes and a large pottery rattle: they may, therefore, have been toys or used in some game.

Of ten terracotta figures, six were bulls, one a buffalo, and another the movable head of a ram figure. The remaining two were headless bodies and cannot be identified. Three model chariot wheels of burnt clay were found together with some broken frames of model carts or chariots.

On some pieces of pottery coated with a thick cream slip, broad zig-zag lines had been scratched with a cone-like instrument before baking. This 'reserved slip' which is only known in the deeper levels of the site resembles in this particular technique certain early pottery from Kish and Ur.

One of the most interesting objects of all those found in this little excavation was a pottery model of a socketted axe.

Mr Mackay's Work after the Suspension of Excavations.

From November 6, 1931, onwards my time was devoted to the preparation of the supplementary book on Mohenjo-daro dealing with my excavations there from 1927 to 1931. Every object had to be carefully tabulated and the field measurements checked. My staff was fully occupied with this work; the draftsmen had to put finishing touches to the many field plans that had been made and to prepare the necessary tracings for publication.

The Museum.

During the season 1931-32, the Museum at Mohenjo-daro was very popular; and though a charge was made for the admission of visitors it apparently did not prevent even the poorer townspeople and village folk from coming to see it. A striking feature was the number of visitors from outside Sind, both Indian and from abroad, who came to the Museum on their way from Lahore to Karachi or *vice versâ.* The retention of a local museum at Mohenjo-daro as an adjunct to the site itself is,—in Mr MACKAY's opinion,—really necessary; for despite its apparent isolation it is being used with profit by visitors from far and wide.

Mr Q. M. Moneer's Work during 1933-34.

While supervising the preparation of a conservation estimate at Mohenjo-daro,—writes Mr MONEER,—I utilized a period of leasure between January 15th and February 6th, 1934, to resume the trial excavation of the Dk I Site, where work had been started by Mr K. N. PURI, the Custodian of Mohenjo-daro Museum, about the beginning of December, 1933. This site is a small mound measuring about 250 feet from north to south and 120 feet from east to west, and is bisected by a nine foot wide street that runs across it from north to south. Starting with the clearance of the street I followed up the excavations over the area adjoining it on the east.

Over its entire length of 250 feet, the street has been cleared down to its original level which, owing to a gradient towards the north, varies from 8′ to 11′ at different points in its course. 10′ 4″ below the top of the walls of the houses flanking it on either side, the street was found to possess a covered drain coursing along its centre, and with this were connected a number of vertical drains and chutes issuing from the back walls of surrounding buildings. Up to 5′ below the surface of its *débris* deposit, very few finds of note were recovered from this street but below that level they came in greater abundance.

Clearance of the eastern half of the mound revealed 56 rooms of different dimensions representing the remains of the three uppermost strata comprising the Late Period of Mohenjo-daro. Those at the top are rather poor and thin in their construction but what survives of the remaining two strata is comparatively substantial.

Antiquities recovered from the street and the rooms mentioned above number a little over two hundred. Noteworthy among those found in the street are two fragments of a shell pin (No. 106), one copper fork with three prongs (No. 107), two complete and several fragmentary steatite seals, a small *liṅga*-shaped stone object, cuboid stone weights of different sizes and two very small crushed beads of gold leaf. Beside a number of pictographic seals the finds made in the western section comprise a variety of objects of every day use, in shell, stone, terracotta, copper and faience. A copper casket 7″ high and 9½″ in circumference was found in the corner of a room of the second stratum and sent to the Director General of Archæology.

EXCAVATIONS AT HARAPPA.

By Mr Madho Sarup Vats.

Editor's Preliminary Remarks.

A considerable amount ot excavation was carried out at Harappa during the year 1930-31; unfortunately, the grant for operations at this place as elsewhere was drastically retrenched during the subsequent three years; from a total allotment of Rs. 20,000 for 1930-31, it has been cut down to 5,000 in the next year and to *c.* Rs. 3,000 during 1933-34. It is very much regretted that the important research work at this interesting site was so badly handicapped during

the last three years under report. Mr M. S. VATS submitted the reports which follow and which are published here with minor changes but considerably abbreviated.—*Editor.*

Excavations during 1930-31: Site II.

Operations at the prehistoric cemetery[1] were extended over an area of 80 feet in length from north to south and 40 feet in width from west to east along the eastern edge of the eastern trench which was dug to an average depth of 6′ 3″. Here a number of pot-burials of the first stratum were recovered (Plate XXIV, *a*). About 8′ north-north-west of jar No. H169 was found[2] lying slightly inclined towards the south a jar of the finger-pinch-pattern (Nos. H617 and H619). 22′ 6″ due S. of H619 was a group of two jars and two vases numbered H620. Of these H620*a* is a carinated pot much larger than the three examples found before. It was originally covered with a large painted inverted bowl of which two or three fragments survived a few inches higher than the mouth. (Plate XXVII, *a*, bottom row, middle). The upper part is divided by broad bands into two tiers, each of which is further subdivided into a number of triangular panels by means of a chevron of double lines. The panels are decorated mostly with flying kites (?) or rows of other birds (Plate XXVII, *a*, upper row). Placed along with this jar were: a miniature vase of the same shape in which was closely fitted a flask which had crushed its tender fabric (H620c), a neckless round vase (H620d), and an ellipsoid jar (H620b) with dog-collar neck. The latter is painted with bands at three places and broken into several pieces; and its mouth was tightly closed with the lower part of a cover of some sort.

4′ S.W. of jar H620b was the bottom of a fragment of jar H621, and 6½′ S.E. the lower half of another jar, H622 of the finger-slip pattern. 4′ E. of H622 was jar H623 broken in the upper part. This is painted in two tiers: the upper shows rows of birds alternated by series of five rectangular devices, resembling pairs of human eyes, with leaves(?) placed along their outer edges. The lower tier is decorated with rows of kites alternated by rows of other birds. (Plate XXVII, *a*. second row, right). 7′ N.E. of jar H620a was the lower portion of jar H624, and 10′ roughly E. a jar of the finger-pinch pattern, H625, covered with an inverted plain round vase. There were brickbats below the N.E. side towards which it leaned. Part of the jar has disappeared and the rest is crushed.

As will appear from Plate XXIV, *a*, there are three small remnants of walls close to each other appearing just below the surface, near which were found several pot-burials; though I do not think that these walls had any connexion with the graves. Lower down, the place is devoid of any structure, except the corner of a room at a depth of 5′. The second stratum of pit-burials does not proceed in this direction but seems to end with burial H306.[3] Here, as in the greater part of this trench, there were huge accumulations of potsherds, brickbats, nodules, ashes, *etc.* Near the remnants of walls were found: the fragment

[1] For its exact situation see *A. S. R.* for 1929-30, p. 124.
[2] *Ibid.*, Plate XXV (lowermost in the plan).
[3] *Ibid.*, Plate XXV.—skeleton and pots slightly above bottom line.

of a steatite seal (H604), two seals of the unicorn type (H611 and H643), and one rectangular steatite seal (H637), plain on one side and convex on the other.

In the N.E. corner of the existing main trench here we have cleared a large pit measuring 78′ from N. to S. and 37′ from W. to E. In its northern portion was found lying on its side in a bed of silt an ellipsoid jar with dog-collar neck (H627) at a depth of 7′ 9″, *i.e.*, considerably lower than the level of the second stratum. 8′ 2″ below the surface was found a small round vase (H607) with graceful neck and flat bottom. It is painted with two peacocks one behind the other, and resembles a vase of the second stratum from the northern extension of the western trench. (Plate XXIX, *a*, 1). Slightly lower, and near the eastern edge of the trench were found entirely broken the lower part of an earthen jar with painted bottom, a small *ghaṛā*,[1] a deep basin with tapering sides; all exactly identical with their prototypes ubiquitous in the mound, and apparently thrown here in a four feet thick layer of rubbish consisting of nodules, potsherds, brickbats and ashes. In the southern portion, which is characterized by the absence of soft soil, there were plenty of brickbats and potsherds; here were found part of an upper jaw, hip and further fragments of bovine bones. In the middle portion, however, the soil was hard and unmixed. Further down at a depth of 11′ in the southern portion a large number of cattle bones, mostly fragmentary, were again discovered.

Along the western edge of the eastern trench a terrace measuring 65′ from N. to S. and 25′ from E. to W. was excavated; this could not be finished last year. 15′ N.W. of skeleton H501a,[2] in sub-squares R $\frac{3}{2}\frac{3}{5}$ and S $^{3}_{5}{}^{3}$ was found a dismembered human skeleton (H636) (Plate XXV, *b*, bottom right corner) lying from N.E. to S.W. at a depth of 3·40′ below datum level. The legs and feet were separate from the upper portion, which again was not in the natural physical order. The skull, of which only the left half remains lay on that side between two humeri and pointed towards the feet. The rest of the bones were also found in disorder. No pottery was found with this skeleton.

8′ N.W. of burial H501 lay in sub-squares R$\frac{3}{2}\frac{3}{5}$ and S$^{3}_{5}{}^{3}$ from N.E. to S.W. the skeleton of an adult (H502g) (Plate XXVI, *b*, bottom right corner) with large and well developed bones. The head was turned on the left cheek, and the legs were inflexed. The right forearm was placed across the abdomen; the left arm was doubled up alongside the body. (Plate XXIV, *e*). The pottery lay on the head side, and consisted of two *kalaśas*[3] (H502a), each covered with a flask, a plain flat bowl (H502b) with the usual flask, one large flask (H502e) which lay close to the smashed *kalaśa* on the right, two saucers (H502c), and five platters (H502d) of which four are now broken. Between the saucers and platters were a few fragmentary animal bones.

About 14′ S.W. of this burial lay from N.E. to S.W. skeleton H695 with large and well developed bones. (Plate XXVI, *b*). It lay supine, (Plate XXIV, *d*),

[1] Mr VATS uses the term *ghaṛā*; this is a pitcher: a round, very swelling body, hardly any neck, and usually a wide lip.—*Editor.*

[2] *A. S. R.* for 1929-30, Plate XXV, about 4″ from top.

[3] What Mr VATS terms with the classical name a *kalaśa*, is a narrow necked-vase with swelling body; thus identical with the Greek κάλπις or the Latin *urna*.—*Editor.*

the humeri were parallel to the body, but the left hand was placed on the right over the abdomen. No pottery was found with this burial but an animal phalange was picked up near it.

15′ 4″ S.S.W. of this grave was lying at a depth of 4·80′ a fully stretched male skeleton (H698) from W. to E.: a direction rarely found in Indus Valley burials. (Plate XXVI, *b*). The head was turned on the left cheek. the hands were crossed over the pelvis, the left hand being placed over the right one. (Plate XXIV, *g*). Another unusual feature is that all the pottery was placed near the feet; it consisted of a painted middle-sized jar (H698a: Plate XXVII, *a*, second row, left) with wide open mouth and distinctly marked bottom, in place of the usual *kalaśa*; two saucers (H698b); one usual flask (H698c); two other flasks, larger than any found before (H698d); and four small round vases (H698e) with no ring-bottoms and long, splaying necks (similar to those of flasks). To the left, and alongside the skeleton from opposite the thorax down to the knees, lay the dismembered body of a ruminant, in one longish group of bones; according to Dr Guha of the Zoological Survey of India, the skeleton is that of a small sheep or goat (H698f). That the animal was sacrificed, is undoubted; for the ribs were uppermost, then came the lower jaw in two fragments, then some long bones and vertebræ, while some of the ribs were placed in the hands of the dead man. The human skull was damaged on the right parietal side; but the bones were found in good condition and sufficiently well developed. The height of the man was above normal.

About 26′ S.S.W. of H695 lay from E.E.N. to W.W.S. skeleton H696 at a depth of 2·69′ below datum with two medium-sized, round, open-mouthed vases (H696a-b) with ring-bottoms, placed towards the head side (Plate XXVI, *b*). Both the vases were closed with flasks of the kind usually covering either *kalaśas* or found in bowls. Both of them are painted at the shoulders with sets of leaves and V-shaped double slanting strokes enclosing an 8-shaped figure (Plate XXVII, *a*, centre).[1] The skeleton was lying on the left side with bent knees, the right leg being placed over the left one. The left arm was placed parallel to the body, while the right was bent at the elbow and crossed over the thorax and the hand placed over the left humerus. The middle portion of the skeleton is missing.

About 12′ 6″ N.E. of this burial was found skeleton No. H697, in a crouching position, from E. to W. (Plate XXVI, *b*). The body was supine, the head resting on the left cheek, the left arm bent upwards and the hand placed over the shoulder. (Plate XXIV, *f*). The right arm was bent at the elbow so as to place the hand on the left lower part of the thorax. The legs were doubled at the knees and the right placed over the left. The skull, except the lower part, has disappeared and portions of the rest of the skeleton are also missing. The pottery found with this skeleton and its arrangement is different from what we have been accustomed to find in burials of Stratum II. Thus, instead of platters and saucers we find here broad cups and lids with handles. There were two broken cups (one within the other) close to the mouth; two more touching them towards the head; two between the bent legs and the left lower arm; an offer-plate (H697c) towards

[1] Very likely a highly conventionalized plant motif.—*Editor.*

the feet (slightly larger than the usual size); two handled lids (H697d); two cups (H697e); one crushed bowl of a thinner fabric than usual (H697b), in which was a small flat-bottomed flask and a middle-sized round *ghaṛā* (H697a) in place of the usual *kalaśa*. The *ghaṛā* was tilted and obviously covered by two cups one of which was still adhering to it, while another lay at the feet over a sherd of the bowl.

Five feet roughly to the W. of this lay skeleton No. H710 from east to west in exactly the opposite direction (Plate XXVI, *b*). It was fully stretched and, except the cranium, fairly well preserved. (Plate XXIV, *b*). The head was turned on the left cheek, the left arm bent up and placed over the shoulder, and the right fore-arm bent and placed betweem the left arm and the left os innominatum. The feet were also turned to left. No pottery was found here.

Some 20′ N. of the western trench at the cemetery I excavated another trench measuring 61′ from N. to S. and 65′ from E. to W., which was dug to an average depth of 5′. Through the centre of the N. side I cut another short trench measuring 29′×18′ in which the depth varies from 6′ to 11′ as it lies on the southern slope of Mound D. The first and second strata were both found to contmue in the southern half; the pot-burials coming as before just below the surface and the pit-burials, none of which is complete, found slightly below the first layer (Plate XXV, *d*). Indeed, in some cases the second stratum is represented only by medium-sized, open-mouthed round vases with ring-bottoms containing flasks with round bottoms; and, as far as pottery is concerned, this does not show any essential difference rather such in shape or details only. (Plate XXV, *a*, 3 and 5). There is but one wall, 10′ 9″ long, in the whole of this area, standing close to the eastern edge at a depth of 5′ 6″. Here, 70′ almost due N. of pot-burial No. H255b, unearthed in 1929-30, was found a badly crushed pot-burial (No. H672) of ellipsoid shape (Plate XXVI, *a*). It is painted in two tiers—the lower consisting only of two 'stars' surrounded by circles[1] and the upper one showing a peacock enclosed by slanting lines. Inside it was another painted round vase (Plate XXVII, *a*, right row). 8½′ and 12′ respectively due N.E. of H672 were jars H673 and H674. The former is egg-shaped and was tilted towards the west. It was covered with an inverted round vase and enclosed by bricks at the base. (Plate XXV, *c*, left). Like jars of the finger-pinch and finger-slip pattern (Plate XXV, *c*, right) it contained a baby in embryonic position. Jar H674 is of the finger-pinch pattern and was secured by brickbats round the neck. Five feet S.E. of H673 was a round vase (H675) found uncovered and decorated at opposite ends with two 'stars in circles' similar to those in the lower tier of H672. (Plate XXVI, *a*). 3½′ E. of H675 was H677 of which again the neck was enclosed by bricks at the shoulder. Nearby were a number of fragmentary vases of not much interest (H676, H678, H679, H680 and H682). 11′ and 17′ respectively almost due W. of jar H672 were the small round *ghaṛās* H683 and H685. The former was tilted towards the S.E., and very much crushed. It is decorated only with bands and appears to have been

[1] Probably a flower pattern, described by Mr VATS as 'circumscribed rayed orbs,' I have indicated this motif in what follows by the words 'stars in circles.'—*Editor.*

covered with a round vase of which pieces were found close to its mouth. H685 is broken at one point and was bent in the course of firing; it is painted at the shoulder with a design of peacock's heads and stars. Between H685 and H672 was the side fragment of a large jar of the finger-pinch pattern (H684). Unlike others of its kind it has black bands in the upper part whose surface is glazed red and decorated with a long-horned gazelle head. The painting on jars Nos. H165 and 231b found previously also shows 'stars in circles': a design common on pots found in this extension of the western trench (Plate XXVII, *a*, centre and right columns).

All these jars lay 9″ to 2′ 8″ below the surface; and, except the very fragmentary No. H676 which stood about 6″ below the datum level, all the others were considerably higher; No. H675 being 1′ 5″ above the datum. But that was to be expected as the surface continues to rise towards Mound D.

Below this stratum, or 2·09′ below datum, was found the upper part of skeleton No. H699 of which the head lay to the N. It consisted of the body up to the thorax and upper part of the arms and had no pottery (Plate XXV, *b*, and XXVI, *a*, bottom left corner). 15′ west of this was recovered a dismembered skeleton (H700) of which the head lay towards the east at a depth of 2·29 feet below datum. The skull is broken into several parts and the mandible showed that only 12 teeth of the owner were fully grown. The arm bones, as well as others, were badly broken, some of them lying along the left of the head. With this burial were found a dish and a medium-size vase with a broad mouth, prominent neck and ring-bottom (diam. 6¾″); and within the latter lay a round vase with long, splaying neck (Plate XXV, *d*, foreground). It is obvious from this and some other pots to be mentioned *infrâ* that the squat, open-mouthed vase, with the round vase inside it has been substituted here for the simpler but larger bowl, with a flask in it, and perhaps also for the *kalaśa* seen so often in Stratum II of the eastern trench. Similarly, the plain dish has been substituted here for the dish-on-stand.

11′ N. of this was found another open-mouthed squat vase with ring-bottom (H701) again with a similar round vase inside. The latter was painted with three 'stars in circles' but no bones were found with this. This and the previous one are painted at the shoulder with leaves (Plate XXV, *a*, 3 and Plate XXVII, *a*, left column). 9′ 8″ to the N.E. of H700 were found two fragments of femurs in connexion with a dish (H702a, diam. 10½″); a round vase with long neck painted alternately with three stars and three gazelle heads (H702c) (Plate XXV, *a*, 6, and Plate XXVII, *a*, centre column); and a round *loṭā*-shaped vase painted with leaves and kites (?) (H702b) (Plate XXVII, *a*, centre column). This last one might be a substitute for the open-mouthed vase. (Plate XXV, *a*, 7, and *d*, centre background). 9′ 6″ east of H701 was another similar open-mouthed vase (H703) with a long-necked round vase inside. The latter is painted with three 'stars in circle' (Plate XXV, *a*, 2) and the former with 3 sets of double, small, dotted circles, one over the other, under an inverted V-shaped device alternated by dotted triangles (Plate XXVII, *a*, left column).

12′ S.E. of H703 was found another open-mouthed vase (H704) with ring-bottom containing a long-necked round vase. The former was broken into several pieces, and slightly lower than this lay the parietal fragment of a human skull without any other bone. The round vase is painted with sets of dotted circles and triangles. 6′ 9″ to the N.E. were H704 and H705; 8′ 6″ N.E. of the latter was H706 consisting of a dish (H706a) and a medium-sized round vase with long neck and ring-bottom covered with a pear-shaped flask (Plate XXV, *a*, 4). The medium-sized vase is painted in two tiers; the lower with three 'stars in circles', and the upper one with a frieze of three peacocks divided by dotted circles (Plate XXVII, *a*, bottom row left). The design of the covering flask is shown in Plate XXVII, *a*, in the middle column.

8′ 6″ S.E. of H700 was the much mutilated skeleton No. H707 which lay prostrate from E. to W. The arms appear to have been doubled up straight over the breast. No pottery was found with this burial. 3′ 9″ N.E. of H707 was the completely overturned and partly smashed jar H709 and 20′ 3″ W. of this was the broken jar H710 of the finger-pinch pattern, both somewhat lower than skeleton H707. In addition to these were found between 4′ 2″ and 4′ 6″ below the surface one rectangular plano-convex seal of steatite (H605) and one faience ball (H655) inscribed with double concentric circles.

From the spoil earth at the cemetery were recovered a rectangular faience sealing (H715), a faience ear button (H663), a very small gold bead (H536), a biconical agate bead (H692) and a cubical chert weight (H666).

Site J.

The depression between the low Mound D and the southern end of Mound A-B has been termed Site J and in this a long E.—W. trench, measuring 210′×20′, has been dug to varying depths ranging from 3′ 10″ to 5′ 6″. At its eastern end is a *kacchā* brick filling; in the middle a broken wall; and in the western portion are remains of two rooms and of one or two floors. Four chert weights (J2, J12, J13 and J49), a copper finger ring with bezel (J47) (Plate XXX, *b*, 5), an antimony rod the upper portion of which shows a dog biting the ear of a goat (J19) (Plate XXX, *b*, 4), a spear-head (J38), a miniature faience goblet (J339) (Plate XXX, *f*, 3), four seals of the unicorn type (J20, J21, J28 and J46), a fragmentary steatite seal showing the hind part of a rhinoceros (J139), a very small rectangular seal of burnt steatite, and two small double convex and bent sealings of faience showing an (acacia?) tree on one side and pictograms on the other (J10 and J29) were found in the eastern half in connexion with Stratum I; a unicorn seal (J121) and a terracotta disc representing a *śīśam* leaf (J106, Plate XXX, *a*, 4) in the western portion in connexion with Stratum II; and a carinated vase painted with rows of birds (J176) from Stratum III. A pit measuring 40′×20′ was sunk in the eastern portion to a depth of 20′, down to which there were regular lines of ashes, ashy earth mixed with potsherds, brickbats and nodules. In this pit were found among others a long and narrow cylindrical perforated vase (J148) 6′ 4″ below the surface, a

miniature ribbed vase (J80), two fragmentary hollow flesh rubbers, a copper chisel (J124) and spear-head (J125), two double convex terracotta bottles with merely a hole for mouth (J109) between 8′ and 10′ 8″. Still further down, between 14′ to 16′, were found two terracotta bulls, the two fore and the two hind legs of which are not shown separately (J172 and J185, Plate XXVII, *c*, 1 and 2). A similar treatment of the pairs of legs has been found previously in Trench I on Mound F from the Vth stratum downwards.

At right angles to its eastern portion was sunk a trench 70′ from N. to S. and 31′ from E. to W. This has been termed Trench II (as Trench I was sunk here three years ago). Southwards it cuts into Mound D and continues to rise until it ends at the ridge where remains of Strata I to IV have been uncovered. The first stratum is represented by four walls running E. to W. and in connexion with this were found two seals of the unicorn type (J273 and J41), 3 very small rectangular seals of burnt steatite (J274, J279 and J30), two small triangular prismatic seals of the same substance (J212 and J231), and a circular faience sealing (J269). The second stratum is equally fragmentary, and represented by several small walls coming at a depth of 5′ 6″ to 7′ below the surface. Nevertheless a number of interesting objects were found in it, one of which, a steatite figure of a bird, is illustrated in Plate XXIX, *c*, 5. The third stratum is represented by a nearly complete room close to the southern edge, in front of which is an L-shaped gallery and aligned to the south a large room of Stratum IV measuring 17′ from E. to W. and 10′ from N. to S. In this large room were found 4 very small seals of burnt steatite, of which two are rectangular (J250 and J256), one heart-shaped (J321) (Plate XXIX, *b*, 6) and one fish-shaped (J329). In the adjoining open space of 25′ N. of the large room were found one very small rectangular seal of burnt steatite (J235), one gold finger-ring (J260) (Plate XXX, *b*, 1) and a small open vase of silver (J339) (Plate XXX, *b*, 7). One very small steatite seal with a hare engraved on it (J337) (Plate XXIX, *b*, 4) was found in the northern portion outside these buildings.

Trench I was extended along the east, and the old shallow diggings along both of its edges were also deepened. It now measures 147′ from N. to S. and 61′ from E. to W. and slopes down on either side of the central ridge; on the S. to a slightly higher level than the cemetery, and on the N. to the valley between this and the southern edge of Mound A-B. In the highest part it has been dug to an average depth of 10′ to 11′, at the N. end from 3′ 6″ to 5′ 6″ and at the S. from 1′ to 2′ only. Structural remains in the original trench were extremely poor. This year's diggings in the northern portion and the extension along the eastern edge has given distinctly better preserved though not high class remains (Plate XXVIII, *c*). Among finds from the *first stratum* were two unicorn seals (J532), a cubical chert weight (J513) and a terracotta cylindrical seal with a crocodile on one side and pictograms on the other (J478). The *second stratum* is represented only by a few walls in the middle and two or three scattered fragments of structure. Its level was generally indicated by broken isolated jars in the northern portion. Along the western edge were found a number of small objects, mostly seals in

terracotta and steatite, and sealings in faience, which I cannot enumerate here in full.

The *third stratum* is represented by four *kacchā* rooms in the northern section (Plate XXVIII, *c*, centre, foreground), by a series of three rooms in the southern portion which are still partially buried under the eastern edge; and to their west by one complete and one broken room which might have been quite large. Between these two groups are some long and thick walls made of burnt and unburnt bricks or both. Except on the E., the group of four rooms to the N. is bounded by narrow lanes and similarly there is a narrow passage to the N. of the rooms in the southern section and perhaps an open space to the W., but the alignment of these lanes is not quite clear. Parallel to the northern edge is a drain running from E. to W.; apparently coming from the higher slope to the N. This has been uncovered for a length of 45 feet. A number of interesting antiquities were found in this stratum. In the S.E. of the four *kacchā* rooms mentioned above were found: one seal of the unicorn type (J481), three sealings of faience of which one is disc-shaped (J394) and the other two triangular (J359 and J619), and one copper spear-head (J484); in the adjoining rooms to the W. were: two copper spear-heads (J483 and J485), and one rectangular faience sealing (J463). Along the western edge of the trench were found two miniature rectangular seals of burnt steatite (J450 and J575), two small sealings of faience and may more small objects, mostly sealings and seals belonging both to the IIIrd and the IVth Strata, among which may be mentioned here a terracotta hare (J587), and a fish-shaped faience sealing (J493) (Plate XXIX, *b*, 5).

Mound A-B.

In the centre of the southern slope of Mound A-B we have cut a large trench measuring 170′ from N. to S. and 90′ from E. to W. (Plate XXVIII, *a*). Structural remains of six different strata have been brought to light here. The first and second of these go down to about —5′. The former is represented by several broken walls in the eastern and northern parts. The second stratum is equally fragmentary, but attention may be called to one rather irregularly shaped semi-circular wall of the first-second stratum standing close to the northern edge (XXVIII, *a*, foreground). In these strata, along the eastern edge, were found two unicorn seals (12164 and 11554) and half of a plano-convex seal (12178) of steatite.

Stratum III begins some 6′ to 8′ below the surface, and it was in connexion with this layer that we struck upon the outstanding structural find of the season in the form of *a large well* at a depth of 8′ 2″. Otherwise, this stratum is represented by three broken floors in the middle, and some walls and a few crushed jars in the south-eastern portion. Plate XXVIII, *b* shows a broken brick-on-edge floor, in the centre of which is the above mentioned large well, 7′ 2″ in diameter, the ring of which is composed of whole bricks. In this, a little lower was brought to light a smaller, concentrical ring, 3′ 8″ in diameter. The latter ring is built entirely of wedge-shaped bricks 9″ long, and between the

two is a filling of hard and indurated clay 1′ thick. The shaft of the inner ring, the face of which is rougher than that of the outer wall, has been traced to a depth of 62′ where its masonry is somewhat disturbed and it was considered risky to dig deeper. The well having been sunk from a very high level, the exceptional length of the shaft,—which is at least double both in depth and diameter that of the four other ancient wells discovered at Harappa,—may have given way somewhere in the lower portion which can not be followed now; and this probably necessitated the sinking of the smaller shaft inside. In the area S. of this well were found an exceptionally well executed terracotta monkey posed clinging with his hands and feet to the branch of a tree that has disappeared[1] (11625: Plate XXIX, *c*, 3); a fragmentary but very artistic bull head made in shell (11566: Plate XXIX, *c*, 2); a faience ram (11611), and a painted sherd (11995) showing four human figures standing hand in hand between two deer (Plate XXVII, *b*, lower one). The faces of these figures are 'beaked' and they have wavy lines on their heads (probably long hair)—features which are common to the two human figures on pot-burial H206*b* [2]. To the S.E. of the well was found a steatite unicorn seal (11705).

About 12′ below the surface and immediately to the W. of the well mentioned above have been found the remains of a large brick-on-edge floor of the IVth Stratum which measures 35′ from E. to W. and, as it is broken at both ends, is now 10′ wide (Plate XXIX, *g*). Across it stands at a higher level a wall of the IIIrd Stratum. The floor is partitioned into eleven parallel spaces by ten small parapets built of two courses of single brick thickness at varying intervals of 2′ to 2′ 10″, and was throughout covered with a layer of bamboo charcoal—obviously the result of fire. This most probably indicates a thatched roof.[3] On this floor, 20′ W. of the well, were found a broken copper bowl (ht. $2\frac{3}{8}$″, diameter $5\frac{7}{8}$″, No. 12392*c*), an engraver's tool $4\frac{1}{8}$″ long (12392*a*: Plate XXX, *c*, 5), a similar tool with an alabaster handle (12392*b*: Plate XXX, *c*, 1) and two very much decayed and distorted copper bangles. Except a few broken walls near the western edge there is very little worth mentioning of brick remains of the IVth Stratum. Two seals of the unicorn type (11768 and 11837), a T-shaped steatite tablet with four *svastikās* arranged in a chessboard pattern (11649: Plate XXIX, *b*, 2) were found south of the floor and, in the southern section along the east, one very small rectangular seal of burnt steatite (11625), a faience swan[4] whose neck is broken (11893: Plate XXIX, *c*, 4), a conical *liṅga* with spiral ribbing (12292) and a small terracotta double handled cup (11730). Other objects found in connexion with this stratum are a chessman of trans-

[1] This little figure, somewhat smaller than 2″, is a real masterpiece in expression and action, and deserves a place of honour among the terracottas found in the Indus Valley.—*Editor.*

[2] *A. S. R.* for 1929-30, p. 122 and Plate XXIX, *f*, 1 *a-b*.—On that jar the (single) human figure is between two horned animals which he holds by two ropes fastened to their necks.—Probably a zodiacal symbol.—*Editor.*

[3] The question is, What was the use of this curious floor with eleven compartments? Perhaps—and this is a mere conjecture—the parapets had wooden fences above them, and the structure served for small stables for sheep or goats; the presence of bamboo could easily be explained then as the covering of this shed; and the sheep may have been kept for sacrificial purposes. For what other reason would people partition off a floor? The distance of 2′—2′ 10″ would just suffice for sheep or goat, but hardly for any other animal.—*Editor.*

[4] In view of its mutilated state it is difficult to agree with Mr VATS about this animal; it may be a wild duck or some other aquatic bird.—*Editor.*

lucent yellowish stone (12352) and a terracotta slab with perforated geometric patterns (12390: Plate XXIX, *h*, 2).

The brick-on-edge flooring mentioned above in connexion with the IVth Stratum has an earlier counterpart to the E. of the large well in which only one partitioning parapet remains now. This is even more fragmentary, surviving to a length of 25′ from E. to W. and a maximum width of 6′. About 100′ south of this is a small bathing floor from which a small covered drain flows to E. for a length of 26′ and then, turning to N.E., ends after another 10′. In the central portion there is one good wall running N. to S., and a few others which are disconnected and poor in construction. Here, 13′ to 15′ 6″ below the surface were found a number of objects comprising 9 *svastikā* sealings of faience (12098, 12031, 11931, 12065 and 12064), 20 chert scrapers, 2 diamond-shaped tablets, 41 fragments of shell bangles, 112 miscellaneous beads, 2 unicorn seals (12002 and 12035), three copper spear-heads (12115, 12177 and 12114), one axe (12393: Plate XXX, *c*, 4), one knife blade (12113), a copper hook-pin (12024) a well polished *sang-i abrī* block ($7\frac{1}{2}\times7\frac{1}{4}\times2\frac{5}{8}$″) slightly concave on all the four sides (11932: Plate XXIX, *e*, 1), a polished stone ball (11867), a chess-man of yellowish stone (12062), a terracotta figurine of a woman seated on a stool[1] (11932, Plate XXVII, *c*, 3), figures of a seated lion and of a praying human (12023) with hands folded and joined legs shown at right angle to the body. In the eastern section were found: a ribbed piece of *sang-i abrī* (11994: Plate XXIX, *e*, 3), a ribbed faience nose-ring (12027: Plate XXX, *b*, 6) and a faience snake-head (12358: Plate XXIX, *c*, 1), and on the brick-on-edge floor two rectangular steatite amulets (12094 *a-b*) and a copper razor of the Irish pattern (12391: Plate XXX, *c*, 2), besides some other minor finds.

About 25′ south of the large well mentioned above has been revealed at a depth of 15′ 9″ to 16′ 6″ a very remarkable deposit consisting of a row of 49 earthenware jars, all broken except one, and in some cases two or even three piled one over the other, lying across the entire width of the trench from E. to W. for a length of 99′ alongside a wall.[2] (Plate XXIX, *f*). Altogether, the wall, which is broken at five places, is 70′ long and stands in sections to a height of 3′ to $6\frac{1}{2}$′.

Further south has been uncovered a huge mass of *kacchā* infilling composed of bricks of varying sizes and measuring 90′ from E. to W. and over 50′ from N. to S. (Plate XXVIII, *a*, white patch in centre). The maximum thickness of the filling is 5′ 9″ and the size of bricks varies from 1′ 7″ to 1′ 1″ in length by $9\frac{1}{2}$″ to $6\frac{1}{2}$″ in width and 5″ to 3″ in thickness. Being isolated from buildings and coming immediately under the slope of the mound it is difficult to tell at present with what particular stratum it should be related. In the western 25′ it descends to the level of the VIth Stratum, being 3′ to 4′ lower than the rest. Scattered over this were found several seals and sealings. Some 13′ S. of this and at a lower level, which is not more than 2′ higher than the

[1] Or was it originally an animal *vāhana* ?—*Editor.*

[2] Mr VATS does not offer any suggestion about the purpose of this remarkable 'Store House', as it can justly be described. Two possibilities occur to my mind, *viz.*, the jars were either for sale (hence two or three on top of each other), or else they contained hidden stores buried near to a wall. The size of the jars is not given.—*Editor.*

valley between this and Mound D, were found 682 *liṅgas* (Plate XXX, *a*, 12, 13, 14, 17, 18 and 19); 37 pyramidal terracotta objects square at bottom (Plate XXX, *a*, 15 and 16)[1]; an unfinished unicorn seal with two holes in the centre; a few small discs of horn; several fragments of bone and ivory rods and styluses; numerous terracotta bangles, whole or broken; one long grindstone; fragments of a few broken pots; a feeding vase shaped like a smoking pipe (Plate XXIX, *a*, 4); an oval, vase-shaped lamp with a spout for the wick (Plate XXIX, *a*, 3): some charred wheat, brickbats, *etc.* Curiously, the spout in the feeding vase is at the level of the bottom so that it would have been difficult to control the flow of the liquid.[2] All the *liṅgas* and pyramidal objects have a white or red slip and a decoration of bands of white and blue colours above the slip. They are holed at the bottom. Other noteworthy objects found in connection with the IVth and Vth Strata are an ivory(?) handle (12061), and a sherd painted with three human figures of which one in the centre is carrying a balance with fishing (?) nets.[3] On either side are fishes, a tortoise, legs of an animal, *etc.* (Plate XXVII, *b*, upper drawing). A terracotta male figurine shown kneeling and the arms stretched out far on both sides[4] was found from the spoil earth at this trench (Plate XXVII, *c*, 5).

Trench IV, Mound F.

In the S.W. part of Mound F Trench IV was extended along the E. for a width of 40′ and a pit 52′×26′ was sunk at its junction with Trench V. It was excavated to a depth of 20′ and in this were brought to light the remains of six strata. The *Ist Stratum* is represented by a circular oven in which slag was freely met with. Close to the surface was found a tiny faience ram (11494). The *IInd Stratum*, as remarked in the report for 1929-30, is throughout very poor. In connexion with the *IIIrd Stratum* were found: a yellow sandstone *liṅga* with fine spiral ribbing indicating folds of skin (11537, Plate XXIX, *e*, 2) a very small rectangular seal of burnt steatite inscribed on both faces (11597), a bottle with narrow mouth and bulging body (11584), and a terracotta piece with two monkeys climbing up the stump of a tree. There are but a few walls of the *IVth Stratum*, while those of *Stratum V* are even more fragmentary and of poorer construction. Nevertheless, numerous antiquities were found in connexion with them. These comprise: ten steatite seals of the unicorn type; eight miniature rectangular seals; one three-sided prism; a number of faience-sealings and minor finds two of which are illustrated in Plate XXIX, *b*, 3, and in Plate XXX, *b*, 2 (silver button with shell inlay). The *VIth Stratum* is represented by a wall about 20′ long, two little pilasters (?) and another broken portion of a wall. In connexion with this may be mentioned one small celt of greyish

[1] Perhaps chessmen for some game ?—*Editor.*

[2] But it may have been used for sprinkling scent or water.—*Editor.*

[3] It seems to me that only one net is held by the man; there is no indication of the left hand not being connected with the figure. This curious drawing is a valuable cultural document. It shows that a circular net with an opening at one end, and no outlet, was in use already in the third millennium B.C. The circular read construction can be seen quite distinctly in the drawing; the man holds the net by that contrivance; this round opening, comparable to the mouth of a sack, was evidently fastened in the river facing upstream.—*Editor.*

[4] Perhaps swimming ?—*Editor.*

blue stone (12225) 3⅜″ long and 2¼″ broad at the cutting edge, and a terracotta bull of the earliest type (united pairs of legs).

S. of this pit, the main extension of Trench IV was excavated to an average depth of 8′ primarily with the object of tracing some more thick walls which appear in the IVth Stratum. Here *seven peculiar four-sided structures* have been found in the last 80′ of the southern section (Plate XXVIII, *d*): four aligned along the N. of a narrow lane running E. to W. some 70′ N. of the southern edge; and three alongside another similar narrow lane which stands 12′-16′ from the same edge. Of the former, the two westernmost are solid four-sided structures making a right angle at the S.W. corner. They are 18′ 7″ apart from each other. About 3′ further E. is a four-sided room of which the obtuse wall runs almost parallel to the corresponding wall of the solid four-sided structure. The rest of the rooms are similarly aligned; the western wall of the four rectangular rooms is obtuse and the eastern wall of the solid four-sided structures runs almost parallel to their obtuse sides.

In the southern section only half of a limestone *liṅga* (12334) and a conical faience boss have been found (12335). In the portion between this and the deep digging referred to above were found two faience sealings of which one is rectangular (12377) and one shaped like a date seed (12078: Plate XXIX, *b*, 1), a pear-shaped faience vase (12226), two miniature wavy stone rings (12241 and 11946), an egg-shaped large granite weight (12368), and an oblong slab of blue stone with deep grooves formed through the sharpening of implements. 40-45′ N. of the broken four-sided room were found two copper implements (12359) in connection with the IIIrd Stratum, and, in the IVth Stratum, a napiform jar (12414, ht. 8″, diameter at mouth 9″). The copper objects are identical in shape but one is larger than the other (Plate XXX, *c*, 3 and 6). Across the centre both have a tubular hole through which is placed a long nail of which one end is turned down in one case, and broken in the other; and on either side of this is a bifurcated blade with straight prongs on one side and curved ones on the other. In the napiform jar were found 15 stone objects (*liṅgas*, grindstones, seals, *etc.*), and a number of pieces of shell with chamfered edges for inlay. (Plate XXX, *d*). The earth inside the jar was greyish-brown and yielded about half an ounce of delicate bones of some bird or reptile and bits of charcoal and potsherd.

No excavations were carried out in the Parallel Walls Area, but in clearing the eastern extension, an earthenware jar was revealed in the Vth Stratum three-fourths full of almost triangular, flat terracotta 'cakes' (Plate XXXI, *d*).[1]

Trench VI.

Trench VI on the eastern slope of this mound[2] was extended at the northern end for 65′×58′ and at the southern for 87′×47′. These extensions yielded 16 seals of unicorn of which 11 are fragmentary besides a considerable number of minor finds, like seals, sealings of faience, objects in copper and terracotta,

[1] This remarkable find is probably a burial deposit; if so, the cakes are 'food for the dead', here replaced by earthenware loaves.—*Editor.*

[2] For a description see *A. S. R.* for 1929-30, pp. 122ff.

etc. Among the burnt clay objects I wish to mention a curious tub-shaped, spouted cup with four holes at the bottom (12141: Plate XXIX, *a*, 2); and among the finds found in the spoil earth near this trench a seal shaped like a hare deserves special mention. Along the eastern edge of the trench a slight extension revealed at a low level a N.—S. wall, 203′ long, broken at two places (Plate XXIX, *d*). For the greater part, it is tilted eastward and stands to an average height of 4-5′. It appears to have been repaired once as the upper part is not exactly aligned with the lower and is contemporary with the IVth and Vth Strata of which the former one joins at the level of the fields to the E.

At right angles to this, two small trenches were sunk towards the E. One of these measures 60′×25′ and the other 80′×40′. The former is devoid of any brick remains but in its western half over a length of 25′ was found a heap of potsherds, animal bones and brickbats from 2′ 8″ to 5′ 8″ below the surface. The sherds comprised numerous fragments of burial pottery of the kind known from the prehistoric cemetery on Site H; and of pots, similar to those found in the mounds. These included fragments of *kalaśas*, of saucers and jars which are of the type of the IInd Stratum funereal ceramic ware. These potsherds, from near the surface of the eastern slope of Mound F and the southern edge of the highest Mound A-B, which I think is one of the latest mounds, throw valuable light on the date of the cemetery; they can in my opinion be assigned to the latest prehistoric phase of the Harappa culture. This opinion is strengthened by the bold and highly developed forms of burial pottery and also by the distinctly more advanced nature of their painting as compared with the painting on pottery from the mounds. Furthermore, as sherds of burial pottery of Strata I and II were found here mixed, it is unlikely that the two were separated from each other by a great length of time, and the fact that there is not much of *débris* between them lends support to this view.

The second eastward trench has revealed the back part of a house running right under unacquired fields and once again points to the desirability of excavating low grounds as soon as acquisition is possible.[1]

Excavations during 1931-32: Trench I.

During 1931-32, the excavation in Mound F, Trench I was carried down to a depth of 14′ in which, as in the adjoining section, remains of five strata of occupation were brought to light. Among them may be mentioned a *kacchā* room (13′ 6″ by 7′ 6″) of Stratum III, which is the third of a series of similar rooms, each composed of mud and mud brick; and a very poorly constructed house of Stratum IV consisting of two rooms on the N., one on the E., and a courtyard in the S.W. portion in which are a couple of rectangular hearths, 3′ 4″ by 2′ and 2′ 6″ by 1′ 6″ (Plate XXXI, *e*, foreground) standing side by side. The walls of this house are only half a brick in thickness, and this necessitated the construction of square pilasters for supports. In one of the north rooms

[1] This, incidentally, is a very important indication that there may be even older layers than those found so far. The same conclusion can be reached from Mr MACKAY'S deep diggings during 1930-31 at Mohenjo-daro, see *suprà*, p. 55f.—*Editor.*

mentioned above, but at a lower level belonging to the Vth Stratum, are two adjacent circular paved mangers, 2′ 10″ and 2′ 5″ in diameter (Plate XXXI, *e*, middle distance), lined with brick-on-edge.[1] The remaining structures are too fragmentary to call for remarks. A number of interesting antiquities were, however, recovered in this excavation. Among them are three entire and two broken unicorn seals (Plate XXXII, *d*, nos. 1, 5, 6, 7 and 8), and nine miniature seals of steatite of various shapes (Plate XXXII, *e*, nos. 1, 2, 3, 4, 5, 6, 10, 15, 18, 19 and 20); a small inscribed lime tablet (Plate XXXII, *d*, 3), and six faience sealings (Plate XXXII, *e*, nos. 12, 13, 14, 16, 17; and same plate, fig. *d*, nos. 2 and 4). The crescent-shaped sealing (No. 12544) adds a new type to the wonderful variety of early seals and sealings of miniature size that are peculiar to Harappa. Finds from this trench also included a terracotta ball[2] inscribed with two pictograms, a cubical die of the same substance, and a large sandstone *liṅga* (No. 12466, ht. 18″, diam. 9¾″) with smooth surface—the largest so far found at Harappa.

Trench IV.

From the point of its junction with Trench V, Trench IV was widened eastwards, first for a length of 206 by 24 feet in width, and later, for 78 feet at the northern end its width was increased to 38 feet. This was done mainly to trace, as far as possible, the peculiar houses of the IVth Stratum with irregularly shaped four-sided rooms and solid corners which are confined to the southern 130 feet of this trench (Plate XXXI, *a*). In this section, there are at least two narrow parallel alleys running from E. to W. which have been shown on the plan as Lane I and Lane II, while at the extreme S. there was possibly an open space or another lane, called III, which is but barely indicated between house 3 and a wall of Stratum IV opposite to it on the S. In addition to these, there are three cross-lanes numbered IV, V and VI on the plan. Between them they enclose *eight remarkable houses of the IVth Stratum* aligned from W. to E. The cross-lanes IV to VI have the effect of making each one of them open on all the four sides. There can be no doubt that, however, haphazard their construction may appear at first sight, all the eight of these peculiarly planned and constructed houses that I have recovered so far have been designed according to a plan and, with the partial exception of house 5, closely resemble each other. Plate XXXI, fig. *b*, shows that little remains of these houses, in most cases the long walls or the solid corner structures being indicated merely by the last brickbats of the core, and in some cases by mud-brick, or only a rammed bed of earthen foundation. Each house is rectangular, and is bounded on all sides by narrow lanes 2′ 6″ to 5′ 8″ wide. In every case there is an irregular four-sided room at the S.E. corner, and, on the opposite side of an oblique passage 3′ 2″ to 4″ wide, a solid structure at the S.W. corner.

[1] 'Manger' is an improbable suggestion. For one thing, there is no place for cattle to stand in front of these 'mangers' to eat from them. They may have served, if they were higher than they are now—which is likely—for dyeing basins; or else they may have been bases into which large-size vessels were placed: store vessels, the presence of which one can expect near such large hearths as those in the foreground.—*Editor.*

[2] This is the only inscribed ball from Harappa.

The W. wall of the former, to which the E. wall of the solid corner is parallel or nearly so, invariably forms an obtuse angle with the south wall. In all the four houses which stood between Lanes II and III, there is *a large rectangular room* at the north end equal to the width of the house, and between this and the *quadrangular room* and *solid corner* on the south side is the *large courtyard* entered by the *oblique passage* referred to above.

Of the above mentioned eight houses, house 1 is better preserved than the others. This structure, the narrow lanes, the curious, oblique entrance passage, the solid construction next to it, and the three rooms ('courtyard' 'large room' 'small quadrangular room') can be seen in Plate XXXI, fig. *c* (and also in Plate XXXIII, fig. *a*, which latter shows the excavations of the year 1932-33).

The other houses, as I have already stated, are even more fragmentary, but the southern portion of houses 3, 2, 4, 6 and 8 is sufficiently preserved to show in each case the quadrangular solid corner and room, and the oblique passage between them. Moreover, in all the eight houses, the boundary walls, however fragmentary, have left distinct traces to enable their dimensions to be clearly fixed. In the east wall of the courtyard of house 2 is a small doorway, 2′ 8″ wide, opening on Lane IV, and across the thickness of the south walls of the rectangularly shaped rooms of houses 2 and 4 is a small drain opening into Lane II. Curiously, in house 2 there is also a drain, but this one runs into the quadrangular room from the courtyard, and if it was meant for everyday use, it is not clear why it could not be directed into the adjoining lanes.

The plan of the solid corners is somewhat puzzling. The purpose for which they were constructed can only be surmised as there is no direct evidence for it. From their measurements it appears that in their present solid form they are commodious enough to have been used as watch towers of some sort. I must also point out that the walls of these houses are sufficiently thick to be suggestive either of an upper storey, for which, however, there is no other evidence; or, more probably, of the need to resist some danger such as floods.

A word may now be said regarding the entrance to these houses. As can be clearly seen in the plan (Plate XXXI, *a*), especially in House No. 4, there are openings left in the wall near the raised platform on the one hand, and on the other, in the opposite wall at the corner where the passage debouches into the middle room ("courtyard"). These small openings were evidently meant to take wooden door frames of which the leaf or leaves must have opened towards the court.

It is clear that the entrance passage, turning as it does to the left, may have served the purposes of privacy—though perhaps only incidentally—as no one could look into the house from the street. This strange plan whereby both the room and the solid corner at the south end of the house were built in such queer shapes, must have been considered to be of vital importance. For, if privacy was the only reason, some simpler way could have been devised, and, in that case, the slit would have been hardly necessary. To my mind there must have been some other strong reason, such as dangee from floods; if this

is so, the slit would have provided a convenient exit for flood-water coming through the oblique passage, as it was bound to whirl round inside and find a way out.

In Lane I and in some of the houses *several furnaces have been unearthed*, which, to judge by the varying amount of vitrification, were probably used for different purposes. Only three of them are brick lined (Plate XXXII, *b*), the others being made of mud, gradually piled up. Some of them at least had irregular domical roofs, of which distinct traces are left in two cases (Plate XXXII, *a*). They are almost all pear-shaped both in plan and section, and their sizes vary from 7′ by 5′ 6″ to 4′ 5″ by 3′ 4″ along the major axes. Two of the furnaces, nos. F(*c*) and F(*d*), stand in House 6, and are contemporary with the IVth Stratum. Of these, furnace F(*c*) is divided across the longer axis into two parts by a partition wall seen broken in the section (Plate XXXII, *c*). Its pyriform pit was full of ashes, and the right hand face of the partition wall shows intenser vitrification than the left hand face. There is but a slight indication of the roof vault in the high back part on the right hand side. It appears to be an early prototype of a reverberatory furnace.[1] These furnaces, associated with all the four strata, are confined only to that part of Trench IV which lies to the south of Trench V, and this fact combined with the meagre accommodation provided in the peculiar houses described above would justify them being called *"The Workmen's Quarters"*. Among interesting finds from this area may be mentioned two faience sealings, a miniature rectangular steatite seal, fragments of a perforated tile, two pottery lamps-on-stand, and a terracotta disc similar in shape to what is now used for rolling out *chapatis* and called *chaklā.*

Excavations during 1932-33: Further Work in the 'Workmen's Quarters'.

What little amount was granted in 1932-33 for excavations at Harappa I spent for the maintenance of the establishment and for extending further east Trench IV in Mound F in order to expose some more houses in the *'Workmen's Quarters'*. This extension is 210′ long and, with the exception of the northern 76′ where its width is 51′ only, it is 70′ wide. The depth of the diggings varies from 5′ 6″ to 7′ (Plate XXXIII, *a*).

In the southern section were brought to light *four more houses* of Stratum IV, two in each block bounded by Lanes I, II and III; these houses are similar in plan and construction to the eight houses recovered in 1931-32 in this area. Being a continuation of them, they have been numbered 9 to 12 (Plate XXXIII, *a*).

Of these, House No. 9, like the previously discovered House No. 5, shows no trace of either the smallish room or the solid platform or corner which, as I pointed out last year, form essential features of these houses and stand opposite each other at the south end of each house. Instead of these, House 9 has only a rectangular room, measuring 15′ 9″×6′ 7″, divided by a thick parting

[1] Cf. *Encyclopædia Britannica*, 14th edn., p. 946.

wall into two unequal chambers. Probably the plan of House No. 5, which is somewhat obscure, was similar.

In Houses 9 and 12 no indications have survived of the back or north room but, as in most others, they are present in Houses 10 and 11. In the north room of House 10 is a contemporary *pear-shaped furnace*, adjoining which and a few feet to the N. outside the house, is another furnace at a considerably higher level which may be relegated to the Ist or IInd Stratum.

In the northern section of this extension have been recovered four fragmentary *circular platforms* of the IIIrd Stratum made of single courses of concentric rings of brick-on-edge masonry. They are similar in every respect to the nine platforms previously found in Trenches IV and V.

Minor finds were rare in this area. Among this year's finds may be mentioned a fragmentary unicorn seal with three pictograms (Plate XXXIII, *b*, 1); an elephant seal with two pictograms (Plate XXXIII, *b*, 2); a cylindrical terracotta sealing showing a god with curving horns over the head standing on one side and six pictograms on the other (Plate XXXIII, *b*, 3); a small chessman-shaped stone *liṅga* (12718); two rhomboidal steatite beads with deeply indented edges[1] (Plate XXXIII, *b*, 4 and 5); a fragment of a bluish stone (jade ?) object, four sided in section, resembling an animal's horn (Plate XXXIII, *b*, 6); and a cubical terracotta die marked with 1 opposite 6, 2 opposite 5, and 3 opposite 4. This marking is similar to that on modern dice and has been noticed only on one other dice at Harappa.

Excavations during 1933-34: Brick Platforms in the Southern Slope of Mound F.

With an even smaller grant than in the preceding years, work at Harappa in 1933-34 had to be restricted to the excavation of the second row of *circular brick-on-edge platforms* which had been traced here in the previous years. In doing so an area, measuring 63′ from E. to W. and 61′ from N. to S., was dug along the southern edge of Trench V in Mound F starting from the point where it meets with Trench IV. As the surface of the mound slopes at this point, the depth of the digging at the level of previous excavations in these trenches varies from 6′ 6″ at the N. to as low as 6″ only at the S.E. corner.

In continuation of the three platforms, starting in the W., in the second (southern) row traced up to the year 1932-33, three more (numbered P15-17) have now been uncovered. Of these, P15 is very much dilapidated and its outline has been traced with some difficulty; the other two, though much better preserved, are also partly broken. Unlike other platforms the latter two are enclosed by contemporary walls of the IIIrd Stratum, and as one of the parting walls runs under platform P17, it is possible that the walls, which survive only to a small height, preceded them slightly. The spacing between the two rows, however, remained unchanged, except in the case of platform P15, which ought to have come exactly opposite platform P7 of the northern row, but which was found a little to the west (like platform P13 in respect of platform P5 of the

[1] A steatite seal of this shape was discovered at Harappa by Rai Bahadur Daya Ram Sahni. Cf.: *A. S. R.* for 1924-25, pl. XXVIII, 12.

northern row). Minor finds in this area are few. Nevertheless, the following six objects deserving of notice were recovered from it (Plate XXXIII, c and d):—

(1) Oval copper mirror with slightly raised rim and narrow tang for insertion in a handle. Lower end of the tang is broken. It is similar to the mirrors recently found at Mohenjo-daro[1] and to those found in Egypt (Plate XXXIII, c). L. including tang 9·75", diams. 7 and 6·25", thickness of rim 0·15 to 0·2". No. 12748, square J 13/22, 2' 6" b.s.

(2) Well engraved unicorn seal with 3 pictograms (Plate XXXIII, d, 1). 1·8" square, thickness 0·6". No. 12751, square K 13/2, 4' 10" b.s.

(3) Unicorn seal, broken diagonally across the lower part, showing 6 pictograms in upper field and horn and hind quarters of the animal (Plate XXXIII, d, 4). L. 0·9". No. 12749, square J 13/23, 2' 6" b.s.

(4) Rectangular, plano-convex steatite seal with 3 pictograms (Plate XXXIII, d, 3). Dms. 0·95× 0·45". No. 12752, square K 13/1, 5' b.s.

(5) Tiny, triangular prism sealing of faience showing pictograms on two sides and an alligator facing left on the third (Plate XXXIII, d, 2: showing all three sides). L. 0·6", w. 0·25". No. 12750, square J. *13/23 1' 6" b.s.*

(6) Bossed conical temple ornament of burnt steatite with an arch-shaped hole for fixing on the underside. Ht. and diam. at base 0·5" each. No. 12753, square K 13/8, 1' 8" b.s.

EXPLORATIONS IN SIND.

By Mr N. G. Majumdar.

Editor's Preliminary Remarks.

Since submitting the report that follows, Mr MAJUMDAR has published a detailed account of his explorations in Sind in a Memoir of the Archæological Survey of India, entitled *Explorations in Sind* (Memoir No. 48: 1934. Price Rs. 17-2, or 27*s.* 6*d.*). Although readers of this volume are referred to that scholarly exposition of Mr MAJUMDAR's very important reconnaissance travels, it has been found useful to publish his annual report in which he deals with the more outstanding finds of his survey of prehistoric sites in Western Sind during the year 1930-31. The text of the author has been slightly curtailed by me.—*Editor.*

Mr Majumdar's Tour during 1930-31.

Since the discovery of the chalcolithic city of Mohenjo-daro, the immediate neighbourhood of the banks of the Indus has been explored from time to time. As a result of these attempts only four sites had been discovered so far, besides Mohenjo-daro. These are *Lohumjo-daro,* near Piaro Goth Railway Station; *Amri,* near the station of the same name, both on the right bank of the Indus; *Chāñhu-daro,* near Sakrand on the left bank of the river; and *Jhukar,* near Larkana.[2] If the civilization represented by Mohenjo-daro has been rightly associated with a great river like the Indus, there was every reason to expect

[1] It is possible that the lower end of the tang was holed like the one from Mohenjo-daro, *A. S. R.*, 1928-29, Plate XXIX, *a*.—
The hole probably served for a nail which would have kept the mirror more firmly in the wooden handle.—*Editor.*

[2] MAJUMDAR in *A. S. R.*, 1927-28, pp. 76ff., for Amri and Chāñhu-daro see *ibid.*, 1929-30, pp. 113ff. and 116ff., and for Lohumjo-daro see *ibid.*, 1924-26, pp. 99-100. For a description of the physical geography of Western Sind see BLANFORD—*Memoirs of the Geological Survey of India*. Vol. XVII, pp. 22ff.

that other sites of this culture, although perhaps not of equal importance, should be found in its neighbourhood. That many such sites have not been found is, however, not surprising, considering that the Indus has been shifting its course ever since we have any record of it. These changes must have been detrimental to many of the ancient sites. The recent discoveries at Mohenjo-daro will further show that one of the principal causes which must have contributed to the desertion of this city, was no doubt the action of the Indus. Considering all these I turned my attention to the long, but comparatively narrow strip of valley to the west of these rivers separating Sind from Baluchistan, which has been from time immemorial protected by natural barriers, in the hope that vestiges of prehistoric times might yet be found in this terrain.

But a lot of preliminaries, that took more than a month, had to be settled before a regular programme of my journey could be framed and followed. During this period I visited Sehwān, famous on account of its shrine of Lāl Shāhbāz where a fair is held annually in memory of the saint. *Sehwān* has been identified with the *Sindimana* of Alexander's historians and with *Sadūsān* or *Sadūstān*[1] "to the west of the Mihrān", mentioned by IBN ḤAUQAL and other Arab geographers. The province of which it was the capital in the Arab times comprised, according to the *Chāchnāmā*, the whole country up to the borders of Makran, the main portion of which must have been *Kohistān*, or the hilly tract of the Larkana and Karachi Districts. In view of the proposed identification of Sehwān with *Sindimana*, accepted by CUNNINGHAM and others, it has often been contended that the mound outside the modern town goes back to the time of Alexander the Great. On inspection, however, it appeared to contain nothing but the remains of a fort of Muhammadan times. The opportunity was, however, taken to investigate the interesting process of decorating carnelian beads with white paint, a craft that was practised in Sind in chalcolithic times, of which examples have been discovered at Mohenjo-daro and Chāñhu-daro. Mr BELLASIS who visited Sehwān about the middle of the last century found this art still prevalent there, and it was presumed at the time of my visit that there would be at least some craftsmen practising it at Sehwān. But on enquiry it was found that this art is no longer in vogue and it is known only to a single man, who was about 75 years old when I saw him. He, however, made a demonstration and showed how by mixing washing soda with the juice of a leafless shrub called *kirar* (Sanskrit *karīra=capparis aphylla*), a liquid may be obtained, which, applied on carnelian, would turn white after firing and stick to it permanently.[2]

Thereafter I visited *Bādrāh* near Dokri in the Larkana District, where a small mound was examined by Mr K. N. DIKSHIT in 1925-26[3] and pronounced to be of prehistoric antiquity. Having encamped at Bādrāh we carried out some trial excavations in the heart of the mound. Pottery painted or otherwise, as well

[1] See McCRINDLE's *Invasion of India by Alexander the Great*, New edition, 1896, pp. 354f.; and Sir William OUSELEY:—*The Oriental Geography of Ebn Haukal etc.*, 1800, p. 154. McCRINDLE's identification of Sehwan with Sewistan is impossible. IBN HAUQAL's text says: "and when one goes from Mansowrah towards Nedcheh, to سدوسان *Sedusan*, the way is by the bank of the river Mihran".—*Editor*.

[2] Mr MAJUMDAR in this interesting observation does not mention whether the design is first carved into the bead, like in *intarsia* work; or whether the liquid is merely painted on to the surface and not into depressions.—*Editor*.

[3] *A. S. R.*, 1925-26, p. 99.

as chert objects were absent, and the only relics collected here which might claim to be of a prehistoric age are part of a copper awl, some terracotta bangle fragments and an animal figurine which might represent a dog. Probably the mound marks the site of a very small habitation of the chalcolithic period, but nothing can be said definitely in view of the scantiness of our data.

The Mounds of Lohumjo-daro.

Our camp was shifted next to *Lohumjo-daro*, near Piaro Goth, not far from the bank of the Indus, sixty miles to the south of Mohenjo-daro. The existence of this site, which covers an area of about nine hundred by six hundred feet and reaches a height of twenty-three feet above the surrounding plain, was first made known by Mr DIKSHIT.[1] My excavation was confined to two trenches on the northern side of the mounds and carried down in places to the water-level, about 11 feet below the plain. Remains of brick buildings were discovered in the two trenches (Plate XXXIV, *a*), and underneath them were found the deposits of an earlier period of occupation. The upper layer yielded an inferior class of painted ware (Plate XXXVII, 16, 24), corresponding to the pottery discovered by me at the 'late prehistoric' level at Jhukar[2] in 1927-28. And from the lower stratum painted pottery of the typical Indus type was collected bearing designs in black on a bright red slip (Plate XXXVII, 17). The main difference between the two wares lies in their surface treatment, the late pottery bearing either a cream slip or light red wash, over which the decoration is applied generally in black, but often a polychrome effect is gained by the introduction of brown or red between two black or chocolate coloured bands. Further, this late pottery is characterized by designs, some of which do not appear on the earlier pottery at all, for instance, 'balls in compartments' (Plate XXXVII, 24). In view of the substantial difference between the two wares we are justified in referring them to two different periods.

Besides painted pottery a number of undecorated vases were also discovered in the course of excavation. Between 1′ and 2·5′ above the ground level were found four small vases with slightly flanged necks and cup-like bottoms terminating in a ring base, of an average height of about 3″. They must have been placed on a matting for finishing, marks of the matting being impressed on their bases. Above this level, between 3′ and 6′ were found a few miniature tumblers, and two grey vases. From the late level, which lies four feet above the ground, were collected a few fragments of pottery vases, showing at the necks incised strokes in horizontal lines (Plate XXXVII, 18) as in the case of some vessels discovered at Jhukar. This class of ware is very rare at Mohenjo-daro, but at Jhukar it was found quite common and there all the examples came from the late stratum. Besides these there were also found fragments of 'dishes-on-stand' with incised decoration, but none of them is to be associated with the late period of occupation. The interiors of these dishes bear rows of short strokes arranged within a circular compartment probably indicating the shooting rays

[1] *Ibid*, pp. 99-100.
[2] *Ibid*, pp. 77-78.

of the sun. Among miscellaneous pottery and other objects that were found mention may be made of a number of bull figurines, one of which has a hole passing through its neck, no doubt intended for a string; imitation 'cakes' of a triangular shape; small cones, the significance of which is yet unknown; and faience bangles (Plate XXXVII, 10).

Of the beads the commonest are disc-shaped and of steatite (Plate XXXVII, 1): these are typical of the Indus culture. From 4 to 5′ above ground came a steatite boss seal with a line of pictographs and the device of a 'unicorn' (Plate XXXVII, 14), and a beautiful chalcedony weight of cubical shape. Among chert objects we may mention one core and five flakes, from ground level to about 6′, and among copper ones, a spearhead (Plate XXXVII, 9), a dagger, a small knife, a razor and a bent awl, from 1′ below ground to about 6′ above ground level.

The Sites of Lake Manchhar.

From Lohumjo-daro we examined quite a number of mounds on the right bank of the Indus, but none of them proved to be of prehistoric antiquity; and gradually our enquiry was pushed westward in the direction of *Lake Manchhar.* In his *Catalogue of Prehistoric Antiquities in the Indian Museum, Calcutta*, p. 10, Mr COGGIN BROWN refers to the discovery of a copper celt at Bhagotoro, which is the name of that portion of the Lāki Range that lies between Tīrth Lāki and Sehwān. As the copper celt, which is now missing from the collection, must have come from a prehistoric site, near this part of the Range, I first carried on investigation along its eastern flank; and later, when it was found that the region immediately adjoining this side of the Range is formed by the silt deposit of the Indus flowing nearby, the search was carried on to the immediate west of that Range, in the tract which touches the shores of Lake Manchhar.

We encamped at Bubak, situated on a canal issuing out of the lake, and carried on our survey along the banks of this sheet of water, which is normally 8 to 10 miles in length and about the same in breadth. In the course of this survey, we came upon a small mound looking like an islet, surrounded by water, where evidence of prehistoric occupation was found on the surface. This place, called *Pīr Lāl Chhatto,* after a Muhammadan saint of that name who lies buried on the top of the mound, is half a mile to the N.E. of *Trihni,* and about 10 miles to the south-west of Bubak. At Trihni we learnt about two more sites nearby, called respectively Pīr Mashāk and Pīr Lohrī, and on both of them relics of the prehistoric age were picked up. *Pīr Mashāk* (Plate XXXIV, *b*), another islet like Lāl Pīr Chhatto, is about a mile to the south-east of *Shāh Ḥasan,* a place well-known to the *shikāris* in Sind, who go there for duck shooting. *Pīr Lohrī* is four miles to the north of Shāh Ḥasan, not far from the Western Nārā and the Lake. The tradition that a city lies buried under a collection of stones, to which the name *Lohrī* is given, was narrated to me by the elders of the neighbouring villages, and the significance of this tradition was realized after I had examined the land to its east. It has not the slightest appearance of a mound from a distance. But the ground here is marked with rectilinear figures

indicating the existence of buried structures of stone, there being no vegetation wherever these stones lie, whilst vegetation grows inside these walls. The following week we transferred our camp from Bubak, and carried out trial operations in succession at the three prehistoric sites.

Excavations at *Trihni* yielded a very interesting type of polychrome pottery, with a thin light red or cream slip, over which the decoration is applied in reddish brown and black. Plants and flowers (Plate XXXVI, 5, 6) are the predominating motifs, but very often they are so much stylized (Plate XXXVI, 12) that it is difficult to recognize their origin, and the tendency seems to have been to draw only partial representations of the flowers. Some of the examples exhibit a naturalistic attempt, and from these it seems that the floral motif was derived from the lotus. Among other motifs occurring on the pottery are 'balls in compartments', the balls being either in red or black; chequers with a thick curvilinear stroke within each square; dots in rows; and hatched conical figures denoting probably leaves of trees. Mention may also be made of a few fragments of large size dishes-on-stand, a number of bangles, imitation 'cakes', two barrel-beads of green feldspar and chalcedony, and a large number of chert flakes and cores of different shades of grey and brown.

The peculiar type of pottery represented by Trihni was discovered also at *Pīr Mashāk near Shāh Ḥasan* so that these two sites must be looked upon as contemporaneous. The preponderance of the flower motif on the painted pottery of Trihni and Shāh Ḥasan is to be attributed to the fact that the lake in which they are situated becomes one sheet of lotuses during the season.[1] The painted ware from these Manchhar sites is, however, totally different from the ware familiar to us from Mohenjo-daro, the main point of difference being the polychrome character of the former; a technique almost unknown at Mohenjo-daro. The question as to the relative age and sequence of these ceramic remains is a rather difficult one. But there are certain points which suggest that the Manchhar pottery should be assigned to a later phase of the Indus culture, being nearer in date to the pottery from the late strata of Jhukar and Lohumjo-daro.[2]

Trial excavations undertaken at *Lohri* brought to light, as was expected, the foundations of a number of small chambers (Plate XXXIV, *d*), belonging to two different periods of occupation, the excavated area covering about eighty by sixty feet. The walls are made of sandstone, and the blocks used are rather roughly hewn. A house with four very small chambers, two side chambers and a verandah were discovered in the second stratum from the top. None of the chambers is bigger than 6½ by 4½ feet,[3] and the little house to which they appertain is not more than 30 by 26 feet. Deep digging carried on in two of the chambers revealed that there must have been at least three strata at this site. The walls

[1] This is hardly a good argument. Decorative art is a matter of fashion, and there are many instances of changes in style at one and the same place—although the vegetation remained the same. Style is such a strong factor that there are several instances of animals being represented in countries in which they do not exist: elephants and lions in China *e.g.*, under the influence of Buddhist artistic traditions.—*Editor.*

[2] Further excavation will reveal the sequence of these wares; yet it is significant and worth mentioning that at almost every prehistoric site polychrome ware (curiously enough) precedes monochrome pottery.—*Editor.*

[3] The reader will realize that these cells could hardly have been living rooms, as the largest one barely allows a full-grown man to stretch himself.—*Editor.*

of the latest period end at a depth of 1¼′ below surface, which means that the latest deposits have practically been swept away. Below these remains, after removing a one foot thick layer of *débris*, were reached the structural remains of the next stratum, and below their foundations after another foot of *débris*, those of the third, at a depth of about 7 feet. But further progress was impossible at this stage owing to the inrush of sub-soil water. Within a foot of the surface, pottery was found in abundance, but on none of the pieces was there any trace of paint, although it is very probable that many of them must originally have formed part of painted vases. The loss of the decoration must be attributed to the fact that for a considerable part of the year the site remains under water. In the middle stratum, as well as in the third one, were found painted potteries of a thin fabric, similar to those collected by me from the lower level of Amri. They are polychrome like the Amri pottery with which they agree also in the designs painted upon them (Plate XXXVI, 4, 10, 11, 17, 18). A number of chert flakes (Plate XXXVII, 4) were found in association with this pottery.

From Lohri we visited a site called *Pīr Lākhiyo* where some trial excavations were undertaken. This place is 4 miles to the north-east of Lohri, not far from the Western Nārā, and is now practically in the midst of cultivation. Being subject to frequent floods it has, like Lohri, become almost denuded. The land adjoining a mosque, that marks the site of the Pīr, is strewn over with pottery bangles and 'cakes' from which the prehistoric character of this site could be inferred. Excavations carried out in two pits sunk near the mosque proved, that although the deposits from the surface strata have been washed away, the remains of the earlier strata lie beneath the level of the plain. A large number of pottery fragments were unearthed, but very few of them belonged to the painted type. This latter resembles the black-on-red type of Mohenjo-daro, and the other remains that were discovered also bore undoubted resemblance to the examples from that site. Some of the most interesting of the relics are: seven terracotta figurines representing the 'Mother Goddess'; a flint weight of cubical shape; steatite beads of discoid, cylindrical and barrel types; and two chert flakes.

Prehistoric sites around Pīr Ghāzī Shāh.

From Lohri we shifted our camp to the vicinity of a mound called *Pyārejo-māri* or 'the Māri',[1] near the tomb of *Pīr Ghāzī Shāh* which occupies a spur of the Khīrthar. The mound is close to a channel issuing out of a spring in the neighbouring hills, the water of which is utilized for irrigation, and must have attracted people in olden times, as it attracts now. From the surface of this mound samples of two types of painted ware were picked up, namely black-on-red and polychrome; and it was considered necessary to attempt a stratification of these two different kinds of ware by trial diggings. The lie of these potteries was first studied in a trench 42 feet by 15 feet, sunk on the eastern side of the mound (Plate XXXIV, *c*). Its top is about 12 feet above and its bottom about 3 feet

[1] In his Memoir the author uses the forms *Peyarejo-mari*, *Piaro Goth*, *Piyaro Naich*, and here *Pyārejo-Māri*; all these forms probably go back to the Hindi word *Piyārā*, 'dear, beloved, charming' (cp. Sanskrit *priya*), and should be spelt accordingly.—*Editor.*

below the level of the surrounding plain. In this trench traces of two strata, and probably also of a third one, were unearthed. The uppermost of these is represented by a stone wall of irregular masonry: and a few stones or fragments of walls bear witness to the existence of the two other strata. Throughout the digging in this trench black-on-red pottery (Plate XXXVI, 3, 8, 9, 13, 15, 20, 21, 25 and 26) was found in abundance. About 2 feet above the ground level, polychrome pottery of a thin fabric (Plate XXXVI, 1, 2, 7, 14) first made its appearance and continued down to a depth of 4 feet, occasionally associated with the black-on-red. It seems thus reasonable to conclude that these two wares may have been contemporaneous, although the black-on-red ware would represent an earlier phase of the Indus culture which might antedate Mohenjo-daro. To ascertain the true sequence of the polychrome pottery with reference to the black-on-red, three pits were sunk at the base of the mound at various points. In all these pits, as in the above trench, polychrome pottery was found at and below the ground level, but not above it.[1]

Some of the motifs occurring on the pottery from Māri are interesting, and may be briefly noticed here. The antelope (Plate XXXVI, 21) and the humped bull (Plate XXXVI, 15) appear on a number of specimens. The latter may be compared with the figures depicted on the pottery from Nāl, Kullī, Mehī, and other sites of Southern Baluchistan explored by Sir Aurel STEIN and Mr HARGREAVES. The peacock is represented sometimes as strutting about (Plate XXXVI, 13, 20) and sometimes as holding in its beak a serpent (Plate XXXVI, 8). The peacock-and-serpent motif is reminiscent of similar examples on Susan pottery. By far the largest number of pottery bear floral motifs, the most noteworthy being the pipal tree (Plate XXXVI, 25) and its leaves. The majority of specimens of polychrome pottery bear geometric patterns drawn in chocolate colour on cream or light red slip. In addition to these colours reddish brown is frequently introduced. The ware is usually thin, of pale or light red colour, and not so well fired as the black-on-red pottery. The motifs include twin-triangles meeting at a point, lozenges in a continuous line (Plate XXXVI, 14), sigmas (Plate XXXVI, 2), and a continuous line of eye-shaped loops (Plate XXXVI, 1, 7). Besides pottery vases, painted and unpainted, a number of terracotta toys and bull figurines were recovered. A good collection was also made of personal ornaments, some of which are: a barrel-shaped terracotta bead, fragments of terracotta bangles with painted strokes in chocolate colour, steatite beads of the discoid type, a cylindrical cornelian bead (Plate XXXVII, 11), a barrel-shaped agate bead, a copper ring, a silver ring and a fragment of a copper bangle. Besides chert blades (Plate XXXVII, 5) a number of copper implements were also discovered, which include a leaf-shaped arrowhead with the original tang intact (Plate XXXVII, 20), an awl and part of a chisel.

From our camp at G͟hāzī Shāh we visited and examined three other prehistoric sites, namely at *Tāndo Raḥīm K͟hān*, *Gurandi* and *Nāig*. *Tāndo Raḥīm K͟hān*

[1] In his Memoir the author decided to call this ware 'bichrome' (p. 148, *loc. cit.*); he recognizes there that this 'bichrome' ware precedes in time the monochrome pottery of Sind; but he still believes that real polychrome ware belongs to a later date. History, however, is not logical, and evidence shows that polychrome painting is older than either bichrome or monochrome ceramic ware.—*Editor.*

is situated four miles to the north of Ghāzi Shāh and contains within its limits a mound about 10 feet high, on the top of which there are Muhammadan tombs. Some parts of the ruins are still free from burials, and this area is littered with painted potsherds. Fragments of stone walls were brought to light by excavation; and painted pottery, chert flakes, terracotta bangle fragments, a ringstone and a portion of a large pottery jar were discovered. The painted pottery is all of the polychrome type, not a single specimen of the black-on-red ware being found at Tāndo Rahīm Khān.

Eleven miles to the south of this place is *Gurandi* where there are two mounds, one of which is called *Ghāzī Shāhjo-ṭhul.* To its immediate north, within a stone enclosure, lies a huge hand-mill of stone, associated with the memory of the Muhammadan saint Ghāzī Shāh. Chert flakes and pale colour pottery were picked up from the slopes of this mound: and about a foot below the surface we exhumed in a group a large jar, which contained one half of a dish with four drilled holes, five vases, in one of which were found a miniature tumbler, nine chert scrapers, all very similar in shape and with extremely sharp edges (Plate XXXVII, 7), another vase and a dish. Probably some of these potteries were originally painted, but on no fragment is there any trace left of the designs, or of paint.

The other mound is about three furlongs to the south-west of Ṭhul. It is about eight feet high, and strewn all over with rubble and prehistoric pottery. The relics collected here on the surface as well as from excavations include chert flakes, terracotta bangle fragments, fragments of perforated pottery vases, head of a terracotta bull, a carnelian bead, a copper ring and some samples of black-on-red pottery.

Seven miles farther south in the narrow strip of valley, stretching north to south along the eastern side of the Khīrthar Range, is *Nāig* enclosed by the Bhit Section of the Khīrthar on the west and by the Badhro on the east. The valley of Nāig is watered by seven spring-fed channels which give it the appearance of an oasis in a desert. There is a Police Outpost at Nāig, opposite which there is a hillock known as *Lakshmīrjo-māri*, which is about 100 feet high. All over this hillock there may be seen fragments of chalcolithic pottery and at its base on all sides, embedded in *débris* are stone walls, representing the foundations of buildings. There is no doubt that these are remains of the prehistoric period. There was no opportunity to carry out any trial diggings at Nāig, and consequently I had to be satisfied with whatever surface relics I could gather in the course of a hurried visit. These relics included a few chert flakes and specimens of black-on-red pottery.

Mounds at and near Āli Murād.

From Ghāzī Shāh we proceeded to *Āli Murād,*[1] eight miles to its north, on the torrent bed of Angai, where there are prehistoric mounds lying in two groups, one immediately to the north of the village (Plate XXXV, *a*) and another to its north-east which has been appropriated to a large extent by Muslims for burial purposes.

[1] Probably *'Alī* or *'Ālī* not *Āli.—Editor.*

The former which was selected for our trial operations is the more conspicuous of the two; its height being 25 feet. Excavations were started near a well on the southern edge of the mound. The well is built of stone and has a diameter of eight feet, occupying the centre of a depression in the mound which probably marks the site of a court-yard. These operations led to the discovery of a long rampart wall built of irregularly dressed stone blocks (Plate XXXV, *b*), which, at the south-eastern corner of the mound, was followed up to a length of 170 feet. This wall, the present height of which is not more than five feet, runs in the shape of a curve and must have served as a fortification. Portions of the wall were traced at various points on the north and east of the mound, as on the south, but no trace of it could be found on the west. The area enclosed by the wall bears traces of many structures built of stone, and in all likelihood the mound represents the site of a chalcolithic fortress. One of its entrances must be located, I think, on the south near the well, where the rampart wall shows a definite break. The well was no doubt contemporaneous with the adjoining buildings, and so far is the only example of a stone well of this period.

The painted pottery collected from Āli Murād is characterized by features shared by that of Mohenjo-daro. The designs are painted in black on red, and the pots generally are of a thick fabric and well fired. A noteworthy feature of this site is the thousands of pottery 'cakes' which may be found all over the area. Other objects of interest besides pottery are: a barrel-shaped agate bead of perfect execution (Plate XXXVII, 15), about 2″ long; a carnelian bead of the barrel type (Plate XXXVII, 2); a copper celt (Plate XXXVII, 19), about 3″ long and 2½″ broad, a copper awl and three chert flakes found inside a large pottery vase.

At Āli Murād information was received of the existence of a mound at *Pāndi Wāhi*, 10 miles to its north-west, and there was no doubt as to its prehistoric character, judging from the surface relics brought from the site. But for the present I had to postpone my exploration of *Pāndi Wāhi*, as preparations were already completed for a long journey to investigate the southern extension of the prehistoric culture, following the old *Kalila* route through the Kohistan hills which was taken by MASSON in his journey from Kalat to Karachi.[1]

Explorations armound Jhāngār near the Manchhar Lake.

Leaving Āli Murād we regained Shāh Ḥasan on the Manchhar Lake and proceeded to *Jhāngār*, near the south-western corner of the lake, where we encamped for about a week. There are a few small mounds, 2 miles to the south of Jhāngār, close to a channel flowing out of a hot spring at the foot of the Badhro range which is 4 miles away. During our first day's inspection a number of chert flakes, mostly of irregular shape, and some pieces of thin, unpainted pottery were collected on the surface of these mounds. But they failed to give any definite clue, because the pottery did not include any specimen that could be associated with either the Indus or the Amri culture. There was no doubt,

[1] *Narrative of Various Journeys in Balochistan*, 1842, Vol. II, pp. 129-150.—For Pāndi Wāhi, see the last portion of this report. p.105.

however, as to the prehistoric nature of the culture represented by the pottery here, in view of the innumerable chert flakes lying all over the area.

Two trenches that were driven into the mound yielded a kind of grey ware with incised patterns. The number of painted potsherds found was very small, these being of a light red colour with continuous lozenges in chocolate colour over a pink slip. Amongst the vases of grey colour the most noteworthy is the 'beaker' type which Mr MACKAY would like to compare with the 'bell-beakers' of the Danubian culture of Central Europe. In the course of excavations a number of chert flakes were found together with two fragments of copper implements, which suggest that this culture is chalcolithic. Two facts, however, stand out prominently; namely, the crudeness of the chert flakes, and the poverty of ornamentation on the painted ware on which two motifs occur in all: a couple of parallel wavy lines and a band of continuous lozenges. In view of these we are perhaps entitled to regard the site as belonging to one of the concluding phases of the Indus civilization.

Mention has been made above of a spring at the foot of the Badhro Range. It is four miles to the south-west of the mounds of Jhāngār. Near this spring there is a hillock 85′ high, which is a spur of this Range, locally known as *Damb-buṭhī*, in many respects recalling the site of Nāig. Remains of stone-built houses may be seen at the base of this hillock and also along its slopes. The place is full of stone blocks once used in the buildings and chalcolithic pottery in which may be recognized many pieces of the black-on-red type. To the south-west of the hillock, on an undulating rocky bed, were also noticed the foundations of a number of chambers built likewise of stone, and fragments of thin-walled pottery vases of cream colour with designs closely resembling those on the Amri pottery. Not a single specimen of the black-on-red pottery could be found in these pottery *débris*, and it is important to note that the thin pale colour pottery is exclusive to this section of the site. Trial pits were excavated in some of the chambers, which yielded pottery of this type (Plate XXXVII, 21, 25, 26). In one of the chambers were discovered an interesting group of saucers, cups and vases (Plate XXXVII, 30-32) which were lying in association with human skeletal remains. The bones were found scattered on the floor of the chamber in a much disturbed condition. There is no doubt that this is a prehistoric burial site, but in the absence of a complete skeleton no idea could be formed as to the orientation of the bodies. A similar group of receptacles, associated with human skeletal remains, was recovered in another chamber. The pottery comprised nine vases and three saucers, and along with these were found two chert flakes (Plate XXXVII, 6) and three mussel valves. Two of the valves were found enclosed one in the other, the inner valve containing a quantity of red ochre.[1]

Two trial pits at the foot of the hillock brought to light remains of stone buildings in which were found painted pottery of the black-on-red type, but not a single specimen was recovered of the thin pale colour pottery mentioned above. The objects from Damb-buṭhī are thus assignable to two distinct groups which

[1] Pigment shells have been found also at Kish, in prehistoric burials. (*Report on the Excavation of the "A" Cemetery, Kish*, Part I, pp. 14-15).

are localized at two separate points on the site; one marking exclusively the burial ground, and the other where the people actually lived. The question therefore arises, Did these people bury their dead in the adjoining area? On first thoughts this would appear impossible in view of the disparity between the potteries from the burial and the dwelling areas. But the difference may be attributed to the different purposes for which the potteries were made, analogous to what WOOLLEY finds regarding the correlation of the two styles "Susa I" and "Susa II". According to him Susa I represents 'the grave style' and Susa II, 'the house style', and in the former we should recognize a tradition based on religious conservatism which preserved the forms and decorations of a primitive age, long after these had passed out of everyday use.[1] It is, therefore, not impossible that in Sind also the funeral pottery was different from the domestic ware.

From Jhāngār, after a march of 8 miles, we arrived at *Bāndhnī*, on the route that leads to Karachi through the Kohistān hills. At this place there is a mound about 29 feet high on which chert flakes and chalcolithic pottery were found in abundance. Excavation, which was confined to an area of 40 by 35 feet, revealed a group of small chambers, but in none of these could we get down more than two feet, as the natural rock upon which the buildings were erected was reached at this level. The painted pottery discovered at Bāndhnī is polychrome in character, but the colours have undergone much change, and have so much faded that it is difficult to recognize them as such. The pottery is of pale or light red colour on which cream, chocolate colour and reddish brown have been applied. The designs, which are all geometric, include twin-triangles meeting at a point, continuous lozenges, a vertical row of solid leaves alternating with uprights, a line of half-elliptical loops with a dot in each, *etc.*

About a mile to the south-east of the mound at Bāndhnī is the Bāndhnī Nāi, below the Karachi Road, which at this point passes over a ridge of the Lāki Range overlooking the stream. The ridge is dotted with innumerable chert flakes and cores, but pottery is entirely absent. There seems little doubt that in *prehistoric* times *people used to cut their flints at this place* and carry them to Bāndhnī on the other side of the river.

Sites further South.

Moving further south, at a distance of seven miles, we came upon ruins on a hillock at *Chauṛo Lāṇḍī* where there once existed a staging bungalow which is now in ruins and unfit for occupation. The hillock can be reached from the Karachi Road, after descending to a spring called Chauṛo and crossing a torrent-bed full of pebbles. Amongst the ruins occupying the surface of the hillock there are many chert flakes and potsherds of the polychrome class, and the outlines of buried stone buildings can be seen at various levels of this site. I excavated a few of the rooms from which a very fine collection of polychrome pottery was unearthed (Plate XXXVI, 16, 19, 22-24, 27-29). Curiously enough no such objects as terracotta animal figurines, bangles, 'cakes', *etc.*, that are of such frequent occurrence at the Indus sites, were found, and black-on-red pottery was

[1] *J. R. A. S.*, 1928, pp. 35ff.

totally absent. The patterns are all geometric, applied in chocolate colour on cream, or, in some cases, over a red slip. The polychrome effect is obtained by introducing a reddish brown band at the necks of vases, which is also repeated below the ornament.[1] The pots are made of a well-levigated clay, but fired at a low temperature; and this is responsible for the colour of the fabric, which ranges between light red and buff. The majority of the pots have thin walls, and the one predominant form seems to be that of the beaker. Quite a large number of patterns are represented on these vases: a continuous line of eye-shaped loops, each with a dot in the centre; two parallel rows of solid lozenges; twin-triangles meeting at a point; a line of eye-shaped compartments; solid leaves placed horizontally in a vertical row, and so on. Along with this pottery were discovered good many chert flakes most of which are well made and have fine cutting edges.

Three miles to the south of Chauṛo, immediately to the east of the Karachi Road, our camp was pitched among the hills. The side of one of these hills is inscribed with a number of remarkable engraved signs, covering a length of some fifty feet. The height of the engraved surface is six feet in the middle, diminishing to three feet at the two ends. It is not unlikely that ever since some remote age the rock has been used as a sort of writing slate for passers-by. It can, therefore, be expected that it should bear the signs of many ages, and it is almost impossible to distinguish among these scribblings those of any particular period. Some of the signs are 'the man carrying a stick', 'human head' and 'palm', 'bow and arrow', 'conch', 'boat', 'Sind ibex' and 'the gazelle'.

Within two furlongs of this hill are the *remains of a prehistoric settlement*, the entire length of which, *nearly two miles*, is dotted with ruins. These extend up to the foot of the *Dhal*, which is one of the offshoots of the Laki Range. Traces of prehistoric civilization may be seen along a water channel running through the heart of this area, and along the foot of a hillock on the top of which we came across vestiges of chalcolithic buildings. A portion of the outlines of these structures was followed up by scraping and shifting superfluous stones; and in the course of this clearance fragments of black-on-red pottery, perforated pottery vases, terracotta 'cakes', dish-on-stand with incised crescents, chert flakes, *etc.*, were found. A miniature trough fragment painted with groups of slanting lines in black on a red slip is particularly noteworthy, as this design occurs also at several other sites to which we shall have occasion to refer later on.

The next march brought us to *Pokaran*, a journey of twenty-one miles through a barren and stony country where water is available only at a place called *Mālirī*, which is six miles to the south of Dhal. At Mālirī there is a spring, the ground adjoining which is studded with thousands of cherts, both wrought and unwrought. Some of the samples that were collected include a core and a number of flakes. In all likelihood this spot represents the site of a workshop of prehistoric peoples, who must have been coming here to prepare chert implements for which the necessary material is readily available in the neighbouring hills. Pokaran, where we encamped, is the name of a torrent-bed; and at the

[1] This painted ware again, like that mentioned *suprà*, is now called by the author 'bichrome'.—*Editor.*

point where the Karachi Road passes through it, there once stood a 'Lāṇḍī' or staging bungalow which is now in ruins. The torrent-bed is here about thirteen hundred feet wide and contained a number of isolated little pools of water at the time of our visit. Following the course of the rivulet westward, one reaches an extensive sheet of water in a hollow that has the appearance of a lake. It was one of the few pleasing sights that greeted us on the way, since our departure from Lake Manchhar. There are ruins of the prehistoric period on both the northern and southern banks of the river, and close to the Lāṇḍī, which itself stands above the remains of earlier buildings, stone walls may be seen embedded in the earth. Specimens collected in the course of excavation include a few painted potsherds and chert flakes, the painted pottery being akin to the class of ware discovered at Chauṛo.

Four miles to the south of Pokaran at a place called *Karchāt*, there is a mound about 27 feet high locally known as *Masumjo-buṭhī*. There are three springs close to the mound, the water of which is carried through channels and utilized for irrigation. Trial excavations carried out on its surface brought to light a few chambers built of stone in which chert flakes, black-on-red pottery, imitation 'cakes', *etc.*, were found. The motifs which occur most frequently are 'assemblage of slanting lines' occurring at intervals and 'a continuous line of eye-shaped loops'. Another interesting pattern is a row of Sind ibexes, which at Karchāt has a local significance, because not far from this place, in the Khīrthar hills, there is a preserve for this animal.[1] Other finds besides pottery include discoid steatite beads, a fine bead of chalcedony of the flat barrel type, a cylindrical lapis lazuli bead and a fragment of a copper pin.

Another site that was examined from Karchāt is five miles to its south-west locally known as *Kohtrās-buṭhī*. It is not very far from the bank of the Bāran river, being situated by the side of the track that leads from Karchāt to Taung. The ruins occupy the top of the hill which has a slope on the south but is steep on the three other sides. As one ascends it from the south, there is first of all the incline of the hill leading up to a low rampart wall, and next a second wall, larger than the first. The latter, which is of cyclopean masonry (Plate XXXV, *c*) shows traces of four ruined bastions with an entrance on the south-east. Entering a quadrangle through this opening the visitor finds himself amidst the ruins of a network of rooms, both large and small, which group themselves into houses separated by broad passages. The hill reaches a maximum height of 95 feet in the north, gradually sloping down to only 10 feet above the ground on the south. The ruins that are spread over this area do not appear to be those of an ordinary settlement, but in all likelihood represent a fortified palace. The foundations of a number of rooms forming a house (Plate XXXV, *c*) and a long alley alongside of it were laid bare. The alley leads from a courtyard adjoining the rampart wall, and a passage branching off from it gives access to the house. There is a small flight of steps at its south-western corner, and a bath $5\frac{1}{2}' \times 3'$ near

[1] I refer to my footnote 1 *suprâ*, p. 94; the fallacy of connecting a decorative *motif* with the nearest surrounding is clearly proved in this case; for the ibex is represented all over Sind, Baluchistan, Iran and Elam, although it cannot be said that there were 'preserves' of ibex everywhere in this extensive area.—*Editor.*

its entrance. The finds recovered from this area include a few fragments of painted pottery, two pottery tumblers, some chert flakes and the fragment of a copper awl. Of the painted potsherds only a few bear traces of the original paint. The motifs traceable on this pottery are solid triangles meeting at a point, comb-shaped branch, and a staircase-like pattern which seldom occurs at other sites.

The next site visited was *Khajur*, six miles to the south-east of Karchāt, on the bank of the Bāran river. The area of the ruins is about a mile in extent, and the settlement seems to have been laid throughout on the low outlying spurs of the Kalerro hill. The site is littered with chalcolithic pottery and chert flakes which comprised some of the longest ones collected during the season. Moving southward to *Ārabjo-thānā* we came upon a mound, 23 feet high, just by the side of a torrent-bed called Kotriwaro-dhori which is connected with the river Bāran. Four pits were sunk at this mound, but as the local people were opposed to our carrying out excavations we had to rest satisfied with whatever objects there turned up from these pits during a few hours of digging. Amongst painted pottery, which mostly represented the pale ware, mention may be made of vase fragments on which the patterns are respectively: a line of lozenges with hatched interior, and chevron, in chocolate colour on cream slip. Besides pottery, a large number of finely made chert blades, part of a copper chisel, two stone balls and terracotta beads decorated with incised strokes were also discovered.

A site called *Shāijo-kotiro* was examined, between Ārabjo-thānā and Khajur, to the east of the road to Thāno Bulā Khān. Fragments of chalcolithic pottery of the black-on-red type and a few chert flakes were traceable on the surface. But unlike Khajur and Ārabjo-thānā the number of flakes at this mound is rather small. The pottery recovered in the course of excavations includes some extremely fine examples. The commonest motifs are groups of slanting lines at intervals, and a continuous line of eye-shaped loops. Special attention may be drawn to the representation of a tree, which may be the date-palm, and to the line of ibexes, on some of the potsherds. A few copper objects were discovered which include the fragment of a .bangle, a small chisel and an arrow-head (Plate XXXVII, 8).

Leaving Ārabjo-thānā we shifted our camp to a distance of six miles on the bank of the Bāran river, just by the side of a hill-site called *Othmānjo-buṭhī* which reaches a height of some fifty feet from the surface of the bank. The river water was found unsuitable for human use, but a hot spring was discovered to the west of the hill which supplied good drinking water. On the top of the hill there are traces of buildings buried in *débris*, and prehistoric pottery may be seen everywhere. Four trenches were cut along some of the walls part of which had been already visible, and the foundations of several rooms were laid bare. In one of the rooms two large size pottery jars were found. In one of these were lying a few animal bones, and a pottery feeding cup with two spouts one of which is now missing. The other jar contained fourteen chert flakes of various sizes and shapes, animal bones, and a few pottery articles. In the room

adjoining was picked up a copper chisel, and in another room a number of chert flakes were found, one of which is a knife blade (Plate XXXVII, 3), whilst another flake, finely pointed, was probably an arrow-head.

Another mound was explored on the opposite side of the river, at *Bāchānī*. But it appeared to be too much denuded, and nothing of much importance was found except a few painted potsherds of the black-on-red ware. A ride of thirteen miles from Othmānjo-buṭhī brought us to *Thāno Bulā Khān*, the head-quarters of Kohistan. Certain prehistoric remains were discovered five miles to the north-east of Thāno, between the torrent beds called Disoi and Gungiaro, about two miles to the west of the Darwāt Pass. But this site also appeared to have become completely denuded, owing no doubt to the floods of the Bāran. Excavations yielded a few specimens of black-on-red and of perforated pottery, a copper bangle, terracotta bangles, a cornelian bead (Plate XXXVII, 12) and about two hundred biconical small lumps, which must have served the same purpose as the so-called 'cakes'.

From Thāno Bulā Khān to Karachi our path lay through *the Mol Valley*. Near the junction of the Mol and the Mālir streams, about twenty-seven miles to the north-east of Karachi, the road passes through a prehistoric site. A few stone walls can be seen here buried in the *débris* from the surface of which pottery fragments, typical of the chalcolithic culture, were collected. But there was no opportunity of carrying out trial diggings at this place. Next a site seven miles from *Karachi* on the road to *Mungo Pīr* was examined. It is marked by a grove of date trees near which there is a spring. The land to the south and east of this spring is dotted with chert flakes, of which a few were collected. Here potsherds are also rather common, although no definitely prehistoric specimens could be detected among them. Indeed some of the pieces appeared to be quite modern, and these found in association with fragments of glass and china made it clear that the place had been occupied in recent years, although the presence of the cherts suggested that the site dated back originally to prehistoric times.

The Prehistoric sites of Dhillānijo-koṭ and Pāndi Wāhi.

On our return to camp at Thāno Bulā Khān we kept ourselves fully occupied for a whole week with the packing and listing of antiquities collected so far, and with despatching them to Mohenjo-daro for temporary custody. When we were again free to resume the journey, our coolies and baggage camels proceeded to *Pāndi Wāhi* in the Larkana District, a trek of 110 miles, and I myself left for Kotri through the Darwāt Pass, a distance of 32 miles. On the way another prehistoric site was examined on the right bank of the Bāran. The place is called *Dhillānijo-koṭ*, about 4 miles to the north-east of *Jhāngrī*, where remnants of a stone wall, 5 feet wide, were discovered, and amidst the ruins of buildings chert flakes and prehistoric potsherds were found in abundance. Lack of time did not allow us to carry out any trial operations at this site. From Kotri a hurried visit was paid to Mohenjo-daro and from there towards the end of March I reached Pāndi Wāhi, our last camp of the season, *viâ* Dadu and Johi.

Pāndi Wāhi is a small village with a Police Outpost, at the foot of the Khīrthar Range overlooking the tortuous bed of the Nārī River along which there is a path through the hills, leading to the eastern border of Baluchistan. The mound of Pāndi Wāhi, which is 21 feet high, now measures 450 feet in length and 350 in breadth. Its original dimensions, however, must have been greater, as earth has been cut away from its edges for the raising of a *band* for irrigation by the local people. Excavations were carried out in three places on this mound. Trench 1 (Plate XXXV, *d*) was dug at its south-western edge, measuring 80′× 20′, and Trench 2 to its north, in the highest part of the mound, measuring 28′× 10′. In Trench 1, which was made sixteen feet deep, two layers of occupation have been exposed; the upper one is marked by certain fragmentary jars found *in situ*, lying at a depth of six feet from the top. Down to the level of these jars a kind of black-on-red pottery was found, rarely intermixed with specimens of the polychrome ware. Below this level there seemed to be a distinct scarcity of the former ware, but the multi-coloured ceramics were found in abundance. Finally, at the lowermost parts of this trench only polychrome pottery occurred. The stratification arrived at in this trench is, therefore, in full harmony with that recorded of the site of *Ghāzī Shāh*.[1] Trench 2, which was deepened only as far down as six feet, yielded black-on-red pottery, as in the upper layer of Trench 1. Curiously enough, in a pit opened to the north-east of Trench 1 at the foot of the mound, not a single specimen of polychrome pottery could be found, but a number of examples of the black-on-red type were collected. It is not impossible that when the later people came to occupy the site, it had already taken the shape of a mound, and they built their houses not only on its top, but also on the slopes, wherever possible. The painted pottery from the lower level of Trench 1 represents mostly a pale ware with designs in chocolate colour over a cream slip. Like at Chauṛo Lāṇḍī and other places, the addition of a third colour, namely reddish brown, constitutes the polychrome character of this pottery. The patterns, which are in the majority of cases geometric, include twin triangles meeting at a point; a line of solid lozenges (Plate XXXVII, 23); lozenges with hachures inside; sigmas (Plate XXXVII, 27); a line of detached rectangles with interior hatching; a line of eye-shaped compartments (Plate XXXVII, 28) and a kind of stepped pattern forming a polygonal figure of twenty sides (Plate XXXVII, 29) which occurs also on the pottery from Nāl in British Baluchistan. In a few cases, figures of the humped bull also appear, but the animal form is given a geometric treatment (Plate XXXVII, 22), as in the case of the animal figures on Nāl pottery. A very rare object picked up from the slope of the mound is a small leaf-shaped flint arrow-head (Plate XXXVII, 13) which has its parallels in the collection of prehistorics brought together by Sir Henry McMAHON, and now kept in the Quetta Museum.[2] These arrow-heads came from Sīstān where similar artefacts have since been discovered by Sir Aurel STEIN.[3] We concluded our journey

[1] It is, therefore, evident—as has been pointed out in several footnotes—that the polychrom ceramic ware belongs to a period of greater antiquity, followed in time by monochrome ware.—*Editor.*

[2] The Quetta Museum has unfortunately been severely damaged in the earthquake of May 31st 1935.—*D. G. A.*

[3] *Innermost Asia*, Vol. III, Plate CXII.

for the season at Pāndi Wāhi and returned to Mohenjo-daro where, under the direction of Mr MACKAY, the Special Officer for Exploration, my pottery and other antiquities were being treated, as was the case also in the previous year. After treatment I took them with me to Simla for study, and later deposited the collection in the Central Asian Antiquities Museum, New Delhi.

THE CHALCOLITHIC SITE AT CHAK PŪRBĀNE SIYĀL.

By Mr M. S. Vats.

Mr Kartar SINGH, Ẓila'dār, Ballewala Canal Rest House, has drawn my attention to the find of some bricks and broken pottery made in the course of digging an irrigation channel. Accompanied by him I visited on the 18th February, 1933, an irrigularly shaped mound, which lies at the southern end of the Bahlolwala Minor, and is about half a mile to the east of *Chak Pūrbāne Siyāl.* On inspection it proved to be another *prehistoric site* contemporaneous with Harappa. It is situated in the Montgomery Tahsil about 13 miles south-east of Harappa, or about 11 miles to the south-west of Montgomery, and lies on the north or right bank of the old bed of the Beas called *Sukh Beās* or simply *Vyāh.* It can be reached by car from Montgomery up to the ninth mile on the metalled Arifwala road, and then by a *kacchā* road up to the site.

The mound, most of which is only a few feet high above the surrounding surface, rises to a maximum height of 15 to 20 feet towards the north. On the west and north it slopes down gradually to the level of the fields, while on the south and greater part of the east it is bounded by the Vyāh which winds round it in the form of an arc. Altogether it covers an area of about five acres and its surface is littered with shattered brickbats and potsherds the colour of which turned black due to the excess of salpetre in the soil. Reconnoitring over its surface I picked up one complete earthenware goblet with a pointed base, a dish-on-stand, sherds of numerous other vessels, some toys, beads, bangles and a few chert pieces. A list of the objects found on the mound and illustrated in Plate XXXVIII is given here:

Plate XXXVIII *a*: 1. Miniature lid with projecting top, damaged; ht. 1¼".

2-3. Fragments of rough circular 'cakes'; Thickness ¾ and 1 inch respectively.

4-5. Fragments of two flanged blackware vessels, No. 4 being deeply grooved above the flange.

6. Fragment with irregular shallow depressions over the surface.

7-10. Neck fragments of goblets with pointed bases.

11-18. Fragments of rings and bangles.

19. Figure of horned bull, broken. Length 1·7".

20. Rough figure of a squirrel or monkey. Length 1·5".

21. Figure of crested peacock with eyes shown at the neck by round pellets, and a collar made of a long dab of clay. Ht. 2·2", length 2".

22. Female head with cup-like appendages at the ears, and a crescent-like protuberance at the back,—features which are familiar from the head-dress of female figurines at Harappa and Mohenjo-daro. Equally familiar is the technique of pinching out the nose.

23-24. Female torsi. In both of them breasts were added by fixing in conical dabs of clay, the left breast of No. 23 being still in position.

b: 1 and 3. Fragments of cream-coloured faience bangles, triangular in section

6. Fragment of a round blue faience bangle.

2, 4 and 9. Fragments of blue faience bangles with herring-bone hatching over the surface.

5. Rectangular carnelian bead broken along the hole, ovoid in section.

7-8. Extremely thin disc-shaped beads of burnt steatite. Diam. 0·23 and 0·09".

11. Bead of banded agate, plano-convex in section. Length 0·4".

10 and 12. Pieces of alabaster.

13-16. Irregular chert fragments.

c: 1. Goblet with pointed base, broken on one side. Scored round the body. Ht. 6", diam. 4½".

2-4. Bottom fragments similar to No. 1.

5. Bottom of a cylindrical tumbler.

6. Fragment of a rather well made ringstand with low wall which is plano-convex in section. Red washed. Diam. 10".

7. Dish-on-stand, stem broken. Ht. 5½", diam. 6".

8. Fragmentary bowl with tapering sides. Ht. 2½", diam. 8½".

9-10. Bottom portions of thick-ware long oval vases.

The similarity of these finds with those of Harappa and Mohenjo-daro will strike any one at a glance. Like those places, this mound also is situated near a dried-up river bed, but does not appear to have been an extensive or prosperous site. Two shallow pits sunk in it yielded typical Indus potsherds and the core of a burnt brick wall. The bricks measured:

1. 13×6½×2⅘".
2. 11½×6½×3".
3. Broken 6×2½".

In my opinion this site is not likely to repay excavation, though it is better preserved than Kotla Nihang,[1] another chalcolithic site surveyed by me in the Ambala District. But the discovery of one more site of this age indicates that more ancient mounds of the same culture may be discovered, possibly including some extensive ones, if a thorough survey is made of the *duāb* between the ancient beds of the Ravi and the Beas.

EXCAVATIONS AT NĀGĀRJUNIKONḌA.

During the four years under review the excavations at the ancient Buddhist site of Nāgārjunikoṇḍa in the Guntur District, Southern Circle, have been brought, more or less, to completion: and steps have been taken to preserve the excavated antiquities of the site.[2] Owing to certain difficulties with the owner of the land upon which Nāgārjunikoṇḍa is situated, no agreement could be reached under the Ancient Monuments Preservation Act; and after prolonged proceedings, the

[1] *A. S. R.* for 1929-30, pp. 131-132.

[2] Mr H. H. KHAN's reports have been entirely rewritten by the Editor, who has also added a description of the plates. —*Editor.*

site has been acquired under the Land Acquisition Act on payment of Rs. 1,954-8-0 as compensation to the owners. It is a matter for gratification that the lands in question have now come into the possession of the Archæological Department (1932-33).

On the other hand, it is very much regretted that the long-planned metalled road from Macherla to the site in question, sanction for the expenditure on which (Rs. 12,000) had been already granted in 1931-32, has not so far been constructed. The grant has been withdrawn, owing to financial stringency, and the building of this very much needed road has been postponed *ad calendas græcas*. The distance from Nāgārjunikoṇḍa to Macherla is 16 miles; the access to the site is extremely difficult; the sculptures and movable antiquities discovered in the course of the operations can not be removed to Madras in view of the almost unsurmountable technical difficulties on bad roads; and visitors, who would probably come in large numbers if there was a good road, must climb over a most trying mountain path on foot for the last five miles from Nāgulavaram to the site. The importance, consequently, of the road to Macherla Railway Station can not be emphasized enough; and it is hoped that the Government of Madras will find means of again sanctioning the grant which they have withdrawn.

Excavation and Finds during 1930-31.

During the year 1930-31 *two more ruined stūpas* have been discovered. One was found in a small mound situated about two furlongs to the east of the village, and close to the main road. This *stūpa* did not yield any objects of outstanding interest.

The other *stūpa* was discovered in a cultivated field some six furlongs to the south-west of the Great Stūpa. It measures 46 feet in diameter, and was originally a plain brick-and-plaster structure, and wheel-shaped, as usual. It contained a number of red earthenware pots and bowls, similar to those discovered by Mr A. H. LONGHURST in Stūpa 9 during 1929-30 and described by him in the Report for that year.[1] Another interesting feature of the *stūpa* under discussion is that it also contained a few bones of an ox and a deer, like Stūpa 9; so that the surmise that *stūpas* have been erected to commemorate the Buddha's former existence in the shape of an animal becomes more and more probable. Mr LONGHURST's remarks on this matter in the Report mentioned *suprâ* will be found of considerable interest. In this connexion it must also be mentioned that no relic casket has been found in this *stūpa* neither were there human bones; so that the possibility of this being a monument for the deer and ox whose bones were buried in it can not be excluded.

In the course of the excavations 66 sculptures have been unearthed, the following being illustrated in the present volume:

Plate XXXVIII, *d:* Two slabs with footprints of the Buddha; *left:* coarse work, symbols engraved; they include the *chakra, kalaśa, triśūla, svastikā,* double-fish

[1] *A. S. R.* for 1929-30, pp. 148ff.

symbol, *etc.*; below the footprint a *stūpa* flanked on both sides by two lions; *right:* better quality work with relievo representations; same symbols; under footprint the *bodhi*-tree with seat upon which cushions, flanked by two seated deer on both sides. two adoring human figures in two bottom corners.

c: Brick with mason's marks, probably in Brāhmī characters: probably upside down, and the reading may be *chavā* (?).

Plate XXXIX, *b:* Fragment of pillar, with square upper and lower portion, middle sexagonal; *bottom panel:* royal personage on couch surrounded by two ladies. one leaving the palace by a door on left, the other accompanied by a child. *Middle portion, lowest panel:* The Bodhisattva leaving his horse and syce in the forest, the latter holding the sword (?) with which he cut his hair (conjectural identification). *Middle portion, middle panel:* two cows; side panel: a *gaṇa* in medaillon. *Middle portion, uppermost panels:* side: not distinctly visible in photograph; centre: prince and his lady seated on a couch in a garden. *Topmost panel: gaṇa* holding a sheep by its horn.

c: Inscribed pillar found near Stūpa 9; square; low reliefs in five tiers. *Bottommost:* wealthy personage, shown as fat man, piling up money, evidently donation to monks standing around the pile. *Second from below:* Important personage on elephant surmounted by umbrella; attendants carrying indistinct objects, one probably a table or chair. *Middle panel:* Important person seated on couch in attitude probably denoting sorrow; ladies about, one with a child on her lap (?) *Second from above:* Important person seated on couch with a lady on each side; two attendants in background. *Topmost panel:* domed building, though not a *stūpa*, with horse-shoe window and a door with closed wings.

Plate XL, *a: Lower panel:* Royal personage seated on throne receiving a religious guest; royal suite (praying to king not to leave his throne??); to the left a young man (the prince?) leaves the palace in the garb of an ascetic, accompanied by lady with flask. *Upper panel:* right: same couple reappears; middle: members of suite leave in procession by the royal gate (?); right: the ascete, his lady and baby, in rocky country (?), being implored to return (?).

b: Lower panel: monkeys in forest with entrance (?) to hermitage; *nāgarājās* adoring an old hermit seated before his hut. *Upper panel:* rocky country with *nāgarājā* emerging from underground; and a royal horseman jumping over a precipice (?) his horse being helped by *gaṇas;* the *nāgarājā* supports an ascetic (?) in the air, who looks back towards the horseman (who pursued him?). Above this panel: *défilé* of composite animals.

Plate XLI, *a:* Buddha's head-dress carried up to heaven by divinities.

b: Right: Standing Buddha in rocky country with lion in cave, deer, trees, *etc.;* preaches to royal personage. Left: scene in palace: *nāgarājā* on couch with two ladies, others on ground before them, all in attitude of amazement, turned towards right.

Plate XLII, *a:* See Dr VOGEL's description in *Annual Bibliography of Indian Archæology for the year 1931.* pp. 15f. The scene evidently refers to a remarkable

constellation of moon, stars and a comet which are seen in the top right hand corner and to which a monk, entering the palace gate on the left, is pointing.

b: The Buddha seated under a tree in rocky country; he is visited by three princes who came out of their fort, shown by a wall behind which are armed men; their horse and elephant waiting whilst the princes worship the Enlightened One. *Défilé* of composite animals on top.

Further Work during the year 1931-32.

During the year 1931-32 Mr KHAN has carried out repairs and general conservation work to preserve the excavated antiquities from damage. The holes dug into the circular compartments of several *stūpas* have been filled up and levelled. The brick-work which filled the inside of almost all the structural remains was greatly dilapidated and has been repaired. *Stūpa no. 4* was in a very bad condition; the drum and the platform had partially collapsed, and was overgrown with vegetation. (Plate XLIII, *a.*) This has been thoroughly repaired, and the area cleared; the result can be seen in Plate XLIII, *b.* Nearby was a small *chaitya* that has been in a very dilapidated condition; but as most of the parts were extant, it was found possible to reconstruct it, and to add in front the missing semi-circular stepping stone recovered not far from the *chaitya.* (Plate XLIII, *c* and *d.*) Various platforms of the monuments have been levelled and steps have been provided wherever necessary; jungle growth has been cleared away, and roads and pathways improved. The present state of Monastery and Chaitya no. 2 can be seen in Plate XLIV, *c* and *d.*

Among the finds of the year may be mentioned a fragment of what must have been once a cross-beam of a *toraṇa;* the extant portion showing a large scroll very much like those at the ends of the Sanchi *toraṇa* architraves. (Plate XLV, *b.*) This interesting architectural fragment was found at the ruined entrance gate leading to the Nāgārjuna Hill. Other finds include a sculptured panel showing a *nāga,* and a headless image of the Buddha, both found in the neighbourhood of the same gate. All the sculptures are kept now in a barbed wire enclosure; as neither the building of a museum nor the transport of these objects are practicable under the present road conditions.

The following is a brief description of finds illustrated in the plates:

Plate XXXIX, *a:* Carved stone pillar discovered near the Kundeligutta hillock, Nāgārjunikoṇḍa. Top and bottom are square in section, middle portion octagonal, with semi-circular lotus-ornaments forming transition from square to octagonal portions. Excellent carving work, probably of the second century A.D.

d: Fragment of panel showing Bodhi-tree shrine; the door open, inside a seated, haloed Buddha in *abhaya-mudrā* on pedestal under Bodhi-tree; before pedestal two seated deer. Ladies and *gaṇas* around railing which is profusely decorated, mainly with lions

e: Ornamental slab fragment of late school; *kalaśas* in middle, *triśūla* ornaments in bottom, and garland-carriers in top tier.

Plate XLIV, *a:* Carved slab; a very ornate four-in-hand, partly missing now; preceded by armed men. The wheel,—which looks amusingly like a rubber-tired wheel,—is interesting also as it shows clearly the hub, the axle-nut and the bolt; the carriage itself is a square, box-like structure; there does not seem to be a pole, neither hame nor breeching.

b: Group of earthenware pots and bowls found in *stūpas;* including animal bones.

Plate XLV, *a:* Fragmentary slab, showing worship of Bodhi-tree by two princes (?); both holding in right hand what looks like a reliquary; both have interesting though different crowns. The tree has a high railing or pedestal, and is ornamented with broad flag-like bands floating in the air.

b: Scroll ornament described above in text.

Conservation of Great Stūpa, and Finds during 1932-33.

During the year 1932-33 the brick masonry of the Great Stūpa which is set in mud mortar was partly bulging out; and Mr Khan has carried out the necessary repairs with the help of old bricks collected from the ruins.

The sculptures recovered during the year are as follows:

Plate XLV, *c:* Broken panel showing heavenly musicians floating in the air as well as some flying adorers. In the middle a divine personage, evidently opening his mouth to sing, and playing at the same time a string instrument. In the left hand bottom corner a conch-blower. There are some curious turbans in the panel.

d: Broken relievo, evidently fragment of "the Buddha leaving his palace": the Queen sleeping on her couch, attendant-girls sleeping all round her. The person peeping into the room from behind a pillar is, evidently, the Prince Siddhārtha.

Activities during the year 1933-34.

No excavations were carried out during 1933-34, and conservation was restricted to ordinary repairs to monuments and pathways. The sculptures which are still lying in the open-air barbed wire enclosure, underwent thorough cleaning. The lack of a proper museum is very badly felt, and the danger of leaving these magnificent sculptures and images in the open air can not be emphasized enough.

DISCOVERIES IN THE SOUTHERN CIRCLE.

The Site of Buddhapadu.

Mr H. H. Khan visited Buddhapadu, a place some 42 miles from Nellore Railway Station, which on inspection proved to be the site of an ancient Buddhist habitation. The site is marked by a 5-6′ high mound, the length of which is

about half a mile, covered entirely by broken potsherd of the red variety. Surface finds included fragments of bones, bricks, tiles, bangles, beads, *etc.* (Plate XLVI, fig. *d.*)

Mr KHAN has dug two trial trenches down to several feet of depth, but during the short time at his disposal did not find any structural remains. He is, however, of opinion that excavations would yield interesting objects of the Buddhist times.

Finds in the Old Judge's Compound, Rajahmundry.

Whilst digging the foundations for the Coagulation Tank of the Public Works Department, workmen have unearthed a few objects of antiquity which have been duly brought to the notice of the Circle Superintendent. These include a fine stone image of a six-faced divinity on a peacock *vāhana;* an inscribed stone slab the date of which is reported to be Śaka 994 (corresponding to 1072 A.D.); and a number of metal objects of religious use, including a bull, a temple bell, several oil-lamps, *etc.* (Plate XLVI, *e.*) The antiquity of the site is also indicated by the fact that bricks of large dimensions have been unearthed along with the objects mentioned above; and it is a matter for regret that the whole area is covered with modern buildings so that its acquisition under the Ancient Monuments Preservation Act is no easy task. It is also feared that the landowners may do much harm to the ancient site by digging for building purposes.

Important Buddhist Site at Pithapuram.

An educated landowner at Pithapuram invited the Superintendent to inspect certain remains on his property; and it appears that these remains indicate the site of a once important Buddhist settlement.

The whole area is strewn with fragments of earthenware pots, tiles and bricks of the same size and shape as those of Nāgārjunikoṇḍa; remains of a large-sized *stūpa* are marked by a circular mound, some 10 feet in height and with a diameter of some 80 feet; the bricks of this building are clearly constructed in a radiating form and can be well seen in Plate XLVI, fig. *b.* Traces of monastic structures have also been found, and Mr KHAN strongly advises further exploration at what promises to be an important site.

Megalithic Monument at Chettipalaiyam.

The discovery of what was described as a "stone cromlech" together with a few curious vessels at Chettipalaiyam, District Coimbatore, was first made known in local newspapers; and shortly afterwards the District Collector requested the Superintendent to inspect the place. The site has now been declared a protected monument. (G. O. No. Ms. 686, Finance. dated December 15th, 1932.)

The place is situated on a field belonging to a private owner, and is some 12 miles from Coimbatore, two and a half miles from Kallampalayam village (Palladam taluq); the nearest Railway Station is that of Chettipalaiyam, some

4 miles from the site. The mound is only a few feet above the surrounding ground, it is irregular in shape and measures some 71′ by 85′. There is a heap of small quartz stones on one side; the area is full of small potsherds, metal objects and bones. In the middle of the mound is what seemed first to be a rock-cut cave, but which after unearthing proved to be a *megalithic monument.* It is a small, single, rectangular chamber, measuring 4′ 9″ by 8′, with a height of 6′, constructed of large blocks of stone; the top slab, which is a single rock, measures 10′ 9″ by 8′ by 1′. (Plate XLVI, *a.*) In the interior of this structure were discovered a number of objects, now all in the possession of private persons at Coimbatore. They include highly polished black earthenware pots in a remarkable state of preservation; a copper bowl; another bowl with a lid upon which a goat or deer is standing, and which is reminiscent of the Lūristān bronzes of Iran. (Plate XLVI, fig. *c.*) From Mr KHAN's report it does not seem possible to form a definite idea about the age of this site; but it is important to note that he has found a number of similar looking mounds in the neighbourhood, so that it can be surmised that a thorough examination of the locality would yield important results for prehistoric research.

EXCAVATIONS AT PAHARPUR.

By Mr G. C. Chandra and Mr K. N. Dikshit.

The excavations at Paharpur in the Rajshahi District of Bengal which have been in progress since the year 1923, have been carried on and completed during the four years under review. The operations have been extended to a mound called Satyapīr Bhīṭā, or Satyapīrer Bhīṭā,[1] situated at a distance of about 300 yards to the east of the main site of the Great Temple of Paharpur. The reports for the years 1930-31 and 1931-32 have been submitted by Mr G. C. CHANDRA and his accounts are published herewith, considerably abbreviated and altered. The operations were brought to completion by Mr K. N. DIKSHIT, whose accounts for the years 1932-33 and 1933-34 are edited here with only minor changes.

Readers of these reports will find a *site plan* of the Main Temple and the surrounding monastic quadrangle in Plate XLVII, which will considerably help them in following the accounts of the excavations.—*Editor.*

Excavations during 1930-31:

The South-eastern and Southern Portions of the Monastery.

Mr CHANDRA reports: In the *Annual Reports* detailed accounts have been given of the excavation of the Main Temple and of the western. northern and part of the eastern wing of the monastic quadrangle surrounding the Main Temple. During the year 1930-31 I have cleared the southern row and portion of the eastern side of the monastic cells. The whole quadrangle is now

[1] The name means 'The Abode (or, Den) of the Saint Satyapīr.'—*Editor.*

exposed to view; and as can be seen in the site plan in Plate XLVII, on all four sides there is in the middle of the row of cells a kind of larger structure, which, except on the north, seems to have been a triple shrine. From these shrines staircases lead down to the original level of the courtyard. In the middle one of the three cells of this shrine there is a brick dais which must have served for a pedestal of some image; and a water channel, which presumably was intended to carry away sacrificial water from inside the shrine.

The *shrine in the middle of the eastern side* was partially cleared in the year 1928-29; and cleared by me completely during the year under review. This structure is very much the same as that on the western side, the only important difference being that the treads of the steps are considerably wider (18″ wide) and made of large stone slabs. The position of these stone blocks is noteworthy inasmuch as it marks the level of the original inner courtyard (Plate XLVIII, *a* and *b*). The different strata of construction can be clearly discerned in these photographs, the oldest layer being shown by the largest stones. I feel justified in concluding that the lowest layer dates back to the early Pāla period, whilst the latest stratum evidently belongs to the 12th century A.D.

Considerable difficulties have been encountered while trying to ascertain the shape of the structures in the *southern portion of the eastern wing.* This portion has been exploited in the most vandalistic manner by the neighbouring villagers in search of brick, and the Local Board had carried their road right across the mound. Minor remains in the upper stratum are not worth mentioning; but I was more fortunate in the lower layers, some 3-5′ below the surface. Here some 23 cells of the usual plan have been cleared: some of them containing a dais, probably as a pedestal for an image; others were empty and may have served as living cells for the brethren. In most cases the cells have concrete floors.

In a few rooms in which the floor of this second stratum had disappeared, I used the opportunity to dig down to the earliest level. In this respect the cell in the south-eastern corner of the quadrangle offers a good example; here another concrete floor was discovered about 7′ below the surface: under which begins a series of plinths. The floor area at this level was covered with five layers of brick laid flat. The operations were continued down to a depth of 7′ below the third floor, *i.e.*, about 14′ in all, but the virgin soil could not be reached (Plate XLVIII, *c*). A few pits were also sunk along the outer corner of this room, and it was found that the wall in this part descends deeper than elsewhere. This was probably a precaution against the danger from the river which flows close to it.

As already mentioned, the eastern wing suffered most from unauthorised diggings resulting in the destruction of most of the remains just below the surface. But this unfortunate vandalism had also a bright side. The *débris* thrown out by the brick-hunters, treasure-seekers and road-makers has served to preserve more effectively all the structures in the immediate vicinity, and the removal of the heaps of *débris* brought to light several important discoveries of the season including a 'miniature replica' or *Model of the Main Temple*

marked as such on the site plan, which will be described later on. This, as well as another group of five *stūpa*-bases on a platform situated near the south-eastern corner of the quadrangular area, was also buried deep in heaps of *débris*, and all have been recovered in an extraordinarily well-preserved condition (Plate XLIX, *a*: the Model of the Main Temple on the left; the five *stūpa*-bases in middle distance, to the right).

The *southern side of the great quadrangle* consisted of small rolling mounds of *débris* covering an area of about 930 feet by 60 feet. We commenced our operations near the middle of the wing. This was an eminence: the highest point in that area, and profusely strewn with innumerable brickbats, potsherd and other remains. A north-to-south trench was sunk across the breadth of this wing. At every point this trench revealed the existence of several wallings joining *three long parallel walls*. These parallel walls were in reality the verandah, the front and the back walls of the line of cells ranged along this side.

Between the back and front walls, we met with the usual cross-walls dividing the structure into a number of cells, each measuring roughly 13′ 6″ in length and 13′ 2″ in breadth. The width of the monastery excepting the frontage and other subsequent additions is about 55 feet. In the inner face of this monastery we found evidences of subsequent additions and repairs. The damaged and bulged-out portions of the verandah walls were repaired, and two buttresses erected against the original wall one after another. This wall, which seems to be about 8′ 6″ in width at the first sight, is really made of three separate walls erected at successive periods (Plate L, *d*). The earliest one, which is about 3′ 6″ wide, was strengthened by a second wall about 3′ 4″ and a third wall about 1′ 8″ in thickness. Apparently, the first wall with its water outlets fell into disrepair and proved inadequate to meet the thrust on it; a second wall was, therefore, subsequently constructed outside it. When this arrangement too proved to be inadequate, a third wall had to be built to arrest further destruction of the structure.

The diggings along the interior and exterior faces of the southern side were continued both ways from this point, and the whole length of the southern row of cells was exposed to view.

In the *southern wing of the monastery* we cleared 21 cells in the eastern and 17 in the western portion of the central block. It should be noted in this connexion that about six cells at the western extremity of this side were excavated by Prof. D. R. Bhandarkar of Calcutta University in the year 1922 and, therefore, the total number of cells situated in the western side comes to 23. (Cells 89-111 in the plan.) The central block in this case also comprises the usual *three cells* with a circumambulatory passage to perform ritual *pradakshiṇas;* and there is evidence to prove that the floor level of this passage was raised about a foot higher at a later date. Another feature of this middle shrine claims special attention. A narrow rectangular drain runs towards the north-east probably to carry off sacrificial water from inside (Plate LI, *c*). This covered drain has a corbelled top and was probably finished

with a gargoyle (which is missing) at the point of discharge in the exterior wall, just as the one in the middle of the west side. Near the mouth of this drain, a *row of plaques,* found *in situ* (Plate LI, *d*), illustrates the scheme of decoration adopted in the frontage. Of the four plaques, one depicts a lion looking into a well. This is no doubt the representation of the famous *Pañchatantra* story of a lion being decoyed by a hare into a well. As has been reported previously, the same story is repeated more than once in plaques decorating the various walls of the Main Temple. A second plaque which is also interesting depicts a peacock with a snake.[1]

Through the earliest wall of the verandah run a number of rectangular drains, each measuring roughly 4″×6″. That these drains are earlier in date than the two subsequent buttresses, is evident from the fact that the later construction blocked up some of them (Plate L, *d*). Similar drains were also laid bare on the western side. There is good reason for believing that the floor of the verandah just in front of the southern shrine had been much disturbed at a later date. Indeed, a thick layer of sandy soil sticking to almost all the later structures in this area helps us to confirm the local tradition of a great flood, a fact that was also noted by Prof. D. R. BHANDARKAR while he was excavating the south-west corner of the quadrangle.

The frontage in the middle of the southern row was laid bare; as it was in a very bad state of preservation, we had to carry diggings down to a depth of about 12′ from the existing surface, and succeeded in exposing fully the stairs. (Plate XLVIII, *d*.)

The structures unearthed in the southern side consist of almost square-shaped cells opening on a wide verandah running along its whole length (Plate LII, *a*). Out of 47 monastic cells in this side no less than 11 contain ornate brick pedestals close to the back wall, probably intended for installing images (Plate LI, *b*). In constructing these pedestals, the architect invariably fashioned them like the pedestals of stone images of that age (*circa* 9th to 11th century A.D.). A square hole on the top of the pedestal in cell 69 to admit the tenon of the image is significant as proving that, in some of the cells at least, images were installed. Unfortunately, except *an image of a dvārapāla* (?) carved at the base of a broken stone architrave, uncovered close to the back wall of a cell (Plate LIV, *a*), we could not discover any image in or about the cells of the southern monastery.[2] This is probably due to the fact that the desertion of this area was intentional, and the residents had time and opportunity to carry away their valuables. It is also to be noted that the one of the pedestals illustrated in Plate LI, *a* is of carved stone blocks joined together by iron clamps. In the same cell the floor level has been raised subsequently, as we found the lower portion of the pedestal partly hidden.

[1] Special interest attaches to this representation now that the subject has been found painted on prehistoric pottery of the chalcolithic period in India. The rightmost panel, though not well preserved, probably illustrates the legend of Kṛishna tearing up the two *arjuna* trees; see *A. S. R.*, 1926-27, Plate XXXII, *b.—Editor.*

[2] This image—which I ascribe on stylistic grounds to the 8th-9th century—belonged probably to a larger composition, and it is likely that it was an 'attendant' on some divinity. Instead of a club which can be expected with a *dvārapāla*, it carries a bunch of flowers.—*Editor.*

The exterior walls of the monastic cells had been originally pierced with windows which were subsequently filled in with brick masonry (Plate LII, *b*).

The Area between the Eastern Wing of the Monastery and the Main Mound.

This area, which measures roughly 320 feet from north to south and 250 feet east to west, with an average elevation of 7 feet above the low ground inside, drops abruptly at the western side but slopes gently on the north.

With a view to ascertain the nature of the remains buried here, as many as four trenches were laid in different directions. But before commencing the actual diggings, it appeared necessary to remove the *débris* of the former excavations which had been thrown here.

Trenches in the South-East Corner.

The first trench ran south to north (225′×25′) from the foot of the southern wing of the monastery, crossing another east to west trench at right angles. After only a few hours of digging in the first trench, several half-round bricks, cornice pieces and other architectural members were found within a few inches below the surface, plainly belonging to structures of different shapes and forms; then came a fine pedestal with sixteen angular projections—superficially resembling the lotus with sixteen petals—at a depth of about 3′ 9″ beneath the surface level; and next a very large well—the largest of all so far discovered at Paharpur—a little to the north of it (Plate L, *a*).

The second trench cut through this area from the foot of the eastern wing of the monastery also showed signs of promise. The diggings in this trench being widened out. two important structures were partially laid bare. The plinth of the one of these was followed up carefully, and it soon became manifest that the structure unearthed was built in the shape of a simple square (33′×33′) with a slightly projecting rectangular frontage at the middle of each side. ('N' in top left hand corner of quadrangle in site plan.)

We also met with a group of important structures at the crossing of the two trenches and it was decided to completely trace all of them. Close to the pedestal resembling a sixteen-petalled lotus four more were laid bare. These five neatly designed structure-plinths are marked in the site plan as '*Bases of 5 Stūpas*'; they were arrayed together within a rectangular compound with distinct water outlets at two different levels (Plate L, *b*). The trial pits around these bases show that they were on separate platforms built at successive periods (Plate L, *c*); and when all of them were erected, the small compound walls were added to enclose them. That the sanctity of this group was maintained for a prolonged time may be inferred from the fact that there are traces of later restorations and renovations. From internal evidence, I assign the construction of the large well to the north of this area to the last phase of development in the late Pāla period.

In style and technique these five *stūpa*-bases fairly approach the pedestals uncovered in the cells on all four sides of the Monastery though there are differences in minor details; and we place their erection in the same period, *i.e.*, 9th

to 10th century A.D. All of them were opened by me at the centre and were rebuilt with the original bricks after noting carefully the finds down to the water level.

With great difficulty the *large well* situated north of the 5 *stūpa*-bases could be cleared to a depth of about 24 feet. The interior diameter of this well measures 8′ 3″, and the bricks, which were laid most carefully in several decorative courses, are of the same size as those used in the walls of the Monastery.

In the western extension of the second trench, there were very few remains down to the depth of 4′ to 5′ b.s., and consequently it was easy to dig deep and to examine the structures belonging to the earlier stratum. Following closely a few walls laid bare at a depth of about 6′, we revealed the existence of a *large hall of the early Pāla period.* Only a few walls of this hall have been cleared to a length of about a 100 feet; nevertheless, we may reasonably take them to belong to a large building extending south-to-north. This, in all probability, served the purpose of a *Hall of Assembly* (*upasthānaśālā*), an essential part of a monastic establishment (Plate XLIX, *c*). Heaps of charcoal and ashes found inside clearly show that this building had some sort of wooden members, and was destroyed by fire in the end. It may be that this Assembly Hall was too spacious to be spanned by timbers from side to side and so brick pillars had to be erected in it for supporting wooden beams. Here a considerable gap elapsed between the second and the third strata as is indicated from the heaps of *débris* lying over crumbled structures of the 3rd period, which were levelled before the erection of the buildings of the second stratum. Another noteworthy feature of this hall is the two long drains along its outer side walls (Plate LIII, *a*, *b* and *c*). With a view to trace the extension of one such drain we had to sink a few isolated pits, in one of which, a *miniature stone image of Kuvera* was discovered at a depth of 6′ 4″ below surface. This image (ht. 2′ 4″) has on its back the usual Buddhist creed inscribed in the præ-Bengālī characters[1] of the 9th to 10th century A.D. (Plate LV, *a* and *b*).

Extended further to the north, the first trench brought to light what we consider to be the most important architectural discovery of the season. This curious shrine of the middle Pāla period (*circa* 9th to 10th century A.D.) which may best be described as a *miniature replica*, or *Model of the Main Temple* (Plate XLIX, *a* and *b*) has already been referred to above. Suffice it to say that, excepting the staircase portion attached to the end of each side, we have exactly the same number of angular projections in it as we find in the Main Temple. Built in the shape of a cross with the usual surrounding compound, this four-faced shrine, with symmetrical angular projections, measures 48 feet square in all. The scheme of ornamentation with projecting cornices adopted in this shrine also resembles roughly that of the Main Temple and, what is even more curious, there are enclosure walls on all sides of it, just like those built around the Main Temple. Though affected by the ravages of time, enough

[1] Mr CHANDRA wrote "proto-Bengālī"; it must be pointed out, however, that 'proto-Bengālī' characters were not yet in existence in the 9th-10th century; and the inscription is either later than that, or it must be called at least 'præ-Bengālī': an expression which I have chosen with some reluctance, *faute de mieux*, as this term does not cover any known shape of letters.—*Editor*.

still remains to show that at one time this structure must have been very fine. Another discovery of interest made along the outer lines of this building consists in a number of wheel-like round bricks, which were undoubtedly parts of finials of miniature votive *stūpas* (Plate LIII, *d*).

A pit (4′×4′) sunk at the centre of this shrine was carried to a depth of about 10′ from the topmost course. Except a few bits of charcoal found at a depth of 9′ 4″, we did not meet with anything else, though we removed many courses of brickbats irregularly laid in mud mortar. As is apparent from another pit sunk along the southern side of it, this structure has a height of about 3′ 6″ above the courtyard level, and its foundation was carried down to about 6″ below the surface.

With a view to properly drain off this important area we had to sink a new trench (55′×20′) from the western edge of this "miniature replica" to the lower area lying to the west of it, and in this trench a few important plaques were found near its western end. Among these one plaque represents (No. P. 1787) a huntress wearing leaves and carrying an antelope in her left hand; and another (No. P. 1788) a human figure with his left leg placed inside the mouth of an elephant.

Two other trenches were also dug near the northern side of the eastern wing of the Monastery to provide an easy outlet for water during the rainy season.

Structures fiori le mure:
Outside the North Entrance.

An area of about 250′×60′, situated to the north of the gate-house or the Main Entrance was taken in hand for thorough excavations during the year under review (1930-31) and a trench was started from east to west (60′×20′). In this trench we hit upon the foundations and plinths of *two well planned circular structures* crowned with square brick-built platforms (Plate LII, *c* and *d*); the diameters of these two *stūpas* measure 30 feet and they symmetrically flank the main flight of steps on both sides. The massive square foundations supporting these circular drums give an idea of the heavy superstructures that must have stood over them.

To the east of the eastern one of these two *stūpas a spacious hall* was laid bare. This hall probably served as a resting place for visitors, previous to their access to the sacred compound which might have involved some delay, as we find an "office" of the *mahāvihāra* close by which probably regulated the entrance.[1]

Minor Finds of 1930-31.

The loose antiquities registered from the different areas at Paharpur during the year under report number 462, the most interesting ones of which have already been referred to in the body of the report itself. Of others, specially noteworthy are fragments of a broken image of light red stone, showing a seated

[1] See *A. S. R.*, 1927-28, p. 104.—I have given the Italian description to the above-mentioned structures, as no term could better describe them as *stūpas fiori le mure*.—*Editor.*

cross-legged personage on a double lotus pedestal with fine drapery; a stone head of a figurine wearing a high crown; and a fragmentary seated duck in stone. The terracotta plaques discovered are generally very interesting and exhibit a large variety of objects including among others a curious phallic emblem (?) with three heads (Plate LIV, *c*); a seated, richly attired and ornamented lady with the right hand raised (No. P.1496; Plate LIV, *d*); an archer on a four-wheeled *makara*-cart drawing out an arrow from a quiver (No. P.1815; Plate LIV, *b*); a striding warrior holding a dagger; a peacock holding a snake; a bust of a figure (No. P.1612); elephant, deer, birds, flowers, *etc.* Among potteries are jars and vases of different shapes and sizes, lamps and finials, potter's dabber, rattles for children, several *gharās* full of cowries, crucibles, saucers and perforated covers probably used over lamps. The beads found in the excavations include carnelian, glass, crystal, banded agate, stone and terracotta specimens showing a variety of shapes. Among copper finds, a finely shaped fragmentary vase with closely fitted lid (ht. 5·5"), bangles, rings, *etc.* are noteworthy. A good many objects of domestic use such as currystone, pestle, grinding stones, large grain and corn jars, were found during the year under report; these evidently indicate that at least some of the monastic cells were used for the purpose of residence, and this accounts for such objects of daily use being found in the area.

The river *ghāṭ* situated near the south-east corner of the Monastery has also been investigated. (See the left hand top corner in the site plan). A few pits were sunk which revealed the existence of a finely designed continuous brick-on-edge ramp. This *ghāṭ* descends in a gentle slope to a length of 41′ at which point we found a *band* of stone. The two parapet walls have splayed ends; but we could not fully expose them as water began to emerge.

The Mound of Satyapīr Bhīṭā.

When the major portion of the works of the season 1929-30 was closed, informal possession for excavations of a mound, locally known as *Satyapīrer Bhīṭā* or *Satyapīr Bhīṭā* was allowed by the Rajshahi Collectorate. This flat-topped mound is situated within a few hundred yards to the east of the Paharpur ruins, and rises to a general elevation of some 8′. It is profusely strewn with brickbats, potsherds and remains of old buildings. A systematic opening up of this mound being considered impossible at present, a few trial pits were sunk in the middle portion. Within a few hours of digging, we uncovered the outer face of a fine wall and a fragmentary plaque depicting three seated Buddhas. But as it was decided to leave this new work for the next working season, we filled up the excavated pits to prevent any further damage being done to these remains.

Excavations around the Main Temple: 1931-32.

During the subsequent year, 1931-32, the ground to the north of the Main Temple was taken up for examination and yielded satisfactory results. The end of the northern flight of steps of the Main Temple, and the details of

construction of the two square *stūpas* (site plan: *stūpas* F and G) discovered previously were brought to full view. (Plate LVI, *a*). Now the Main Temple measures 356′ 6″ north to south and 314′ 3″ east to west. The measurements given previously thus require modification.[1] In front of the northern staircase of the Main Temple I found three more square *stūpas*, C, D and E (of which C and D are clearly seen in Plate LVI, *a*). The section of the ground at this place indicates three distinct concrete terraces at three different levels below the topmost one. The lowermost floor is at a depth of about 2′ 3″; *i.e.* 1′ 6″ under the middle one, which is about 9″ below the upper one. The two square-based *stūpas* F and G on either side of the north flight of steps to the Main Temple were evidently erected at a later date over the terraced circumambulatory pathway around this temple and the parallel walls delimiting it. These walls have water outlets marked by arrows in the site plan and were built right down to the edge of the tank in front of the central steps of the monastery at the north side (Plate LVI, *a*, and site plan).

Excavations were also continued along the parallel walls which surround and follow the line of *pradakshiṇa* all round the Main Temple, and a number of water outlets were exposed. These were intended to drain off water from the whole area of the circumambulatory pathway. (Plate LVI, *d*; in the site plan marked by arrows). These walls have deeper foundations and must have been in existence in the early Pāla times as can well be inferred from the foundations of the two later *stūpas* F and G on either side of the steps, another small temple to the south, and the large circular *stūpa* H, also on the south side of the Main Temple. The bottom levels of the foundations of all these structures are much higher than those of the parallel walls alongside and below them, so that they must necessarily belong to a later period. A specimen of the original *jālī* work (perforated screen) which ornamented these walls was left undisturbed by the occupants of the middle Pāla period. Carved bricks of this *jālī* work were utilized subsequently in decorating the plinths of the *stūpas* as can be seen from one left *in situ* near the northern staircase of the Main Temple (Plate LVI, *b*).

While clearing to the south of the Main Temple, we hit upon what were probably steps similar to that on the north side, adjoining the Main Temple. This latter structure was probably disturbed when the circular *stūpa* H was constructed at this place.[2]

Structures in the South-eastern Corner Area.

Close to the middle of the east side of the Monastery the ground was cleared to a depth of about 4′ over an area of about 43′ square. Here the brick foundations of a complex structure consisting of four small square platforms (I, J, K and L in site plan) about 8′—9′ square each at the four corners, connected by compound walls and a larger platform (M in site plan), about 17′ square, at the centre, were revealed. (Plate LVI, *c*).

[1] *A. S. R.*, 1926-27, p. 140.

[2] It is, therefore, likely that the original (or, possibly, the second) state of the Main Temple had two flights of stairs: one on the north ('Main Staircase' of present state) and one on the south.—*Editor.*

To find out the nature and extent of the *Assembly Hall* in the S.E. corner area, trial excavations were made during the year and yielded very interesting results. The outer walls of the Hall have been uncovered to a distance of about 350′ but the end of it is not yet in sight (Plate LVII, *a* and *b*). A very fine and well preserved brick concrete floor was struck at a depth of 8′ 6″ below the level of the floor of the middle Pāla period (Plate LVII, *c* and *d*). To the west of the Assembly Hall a continuous open platform, and close to it a long and open drain were brought to view (Plate LVII, *a* and *b*). This drain (disturbed at places by later occupants) stands at a level distinctly lower than that of the drains discovered last year on both sides of the Assembly Hall at its southern end. The huge accumulation of *débris* in and around this Hall consists mostly of potsherds of different varieties and colours; of which grey, yellow, red, pink and black are prominent. Charred pieces of wood were also found in the filling made when the Pālas erected structures over the Assembly Hall. These finds suggest that the Hall was roofed by wooden beams and joints.

Minor Finds of 1931-32.

Minor finds recovered during the year under review were comparatively few but not without interest. Among these was the discovery on the north side of the steps to the Main Temple of *a set of seven hands* of a small basalt image belonging to the *image of Hevajra* found previously[1] (Plate LV, *c-d*, showing restored image, front and back).

Other important finds included: a broken, perforated bottom of a smelting furnace, about 4″ thick, with remnants of slag in its inside, excavated in front of the flight of steps to the Main Temple; a broken nozzle made for the furnace; and a heavy, broken piece of mixed cast metal $1\frac{5}{8}$″ in thickness, weighing 1 maund and 6 seers. All these finds were surrounded by a black, loamy soil; this justifies the conjecture that sacred images were produced at Paharpur and the metal casting was done under the supervision of the monks who lived in the Monastery and were men versed in that very complicated iconography of later Buddhism that flourished here in conjunction with early Śivaism and Kṛishṇaism.

An interesting piece of stone was found during the diggings with incised drawings of a bull, a horse, an elephant, a bird, a man, a vase and some other indistinct objects (Plate LV, *e-f*). A terracotta matrix; a broken piece of an earthenware plate with a handle with a grey slip (Plate LV, *g-h*); a head and some other broken pieces of stone images; and four Śiva-*liṅgas* of blue basalt stone were amongst the finds of the year under review.

Mr Dikshit's work during 1932-33.

Mr Dikshit reports: During the year 1932-33 I took in hand the excavation of the *Satyapīr Bhīṭā*, a prominent mound situated at a distance of about 300 yards to the east of the Main Temple at Paharpur, which was the ancient *Dharmapāla vihāra.* The name of *Satyapīr* must have been attached to the place in the late 17th or 18th century A.D., as the legends and the cult of this

[1] *A. S. R.*, 1927-28, p. 107, and Plate XLIX, *a*.

saint have been of a recent growth in Bengal. The mound is a flat low eminence rising to a height of only 6-7 feet in the centre, and the whole of it has not yet been properly excavated. The diggings of this year have laid bare the remains of what appears to be *a fairly extensive temple* which underwent renewals and repairs more than once (Plate LVIII, *a*), and *a number of votive structures* of various sizes and designs ranged round the open courtyard of the temple. The size of these votive *stūpas* varies from 4′ 6″ to 14′ square, and their ground plans show considerable variety in the matter of the number and patterns of their projections. On the whole they are similar in plan to the ornamental pedestals in the Great Monastery of the Main Temple, and must therefore be referred to the same period, *i.e.*, about the 11th century A.D.

The area over which these votive *stūpas* extend in each direction has not yet been wholly examined; but it is clear that the Main Temple to which they were ancillary must have been invested with considerable importance. The only clue so far obtained to the identity of the temple are a number of *circular terra-cotta plaques* with the figure of an eight-handed goddess and inscribed with the Buddhist creed (Plate LX, *e*) found at a number of places to the south and south-west of the Main Temple. The figure of the goddess is undoubtedly to be identified as that of the popular Buddhist goddess *Tārā* ('The Saviouress') who is invoked for protection from eight-fold danger as snakes, thieves, wild elephants, *etc.*, the number of hands of the deity probably indicating the eight-fold protection.[1] Such plaques have not so far been discovered in the excavation of the Main Temple at Paharpur, and it would be reasonable to assume that their presence in large numbers at Satyapīr Bhīṭā is due to the association of this site with a temple dedicated to this goddess when she became popular in later Buddhism. Fortunately there is epigraphical confirmation of the existence of a temple of Tārā at *Somapura* (the ancient name of Paharpur), where, according to the Nālandā inscription of Vipulaśrīmitra,[2] a temple of Tārā was built by the same monk. It is therefore very probable that the temple in question was identical with the Main Temple at the Satyapīr Bhīṭā. The date assigned to the Nālandā inscription on palæographical grounds is the first half of the 12th century A.D.; but the earliest temple on the Satyapīr Bhīṭā site appears to have been constructed some time about the 10-11th century A.D. What Vipulaśrīmitra may therefore have done was probably to repair thoroughly or to reconstruct the Tārā temple, just as he is stated to have carried out extensive renovations (*navīna-karina*) in the inner and outer sectors of the four sides of the Monastery.

The Temple and Its Surroundings.

Turning to the remains of the temple as laid bare by the excavations, the last structure on the site which must date from about the 12th century A.D. appears to have been quite near the surface, its concrete floor and walls having been exposed after digging down a few inches only. It appeared to consist of

[1] The full list is: shipwreck, lightning, elephant, thief, lion, serpent, fetters and demons. Lions must have been abundant in Northern India in the sixth-tenth century to be included in this list, as the cult of Tārā is not known to have existed before the sixth century A.D.—*Editor.*

[2] *Ep. Ind.*, vol. XXI, p. 97*ff.*

a shrine (22′ by 18′ 3″), surrounded by a passage about 6′ wide, with a spacious, raised platform in front. The temple must have faced south and access to the southern courtyard was provided by a flight of steps (Plate LVIII, *c*). Two earlier structures were revealed by deeper diggings; and each new level shows an addition of a fresh projection and a fresh stairway on the southern façade (Plate LVIII, *d*). To the south of the Main Temple two rows of four votive *stūpas* each, made of fashioned brick, were uncovered on either side of the courtyard. Further to the east are four more brick *stūpas* and circular jars beyond the two rows of seven votive *stūpas*, each separated by 1′ 6″ (Plate LVIII, *b*). These *stūpas* are somewhat larger in size; the outer row has not yet been excavated. To the east of the Main Temple are four miniature but elegant votive *stūpas* built on a common platform (Plate LX, *a*). At the north-east corner of the temple is a single shrine enclosed within a boundary wall. Beyond this is a further row of votive *stūpas*, the furthest ones of which have yet to be excavated. One of the votive *stūpas* in the south-west sector (Plate LX, *c*) differs from the others inasmuch as its exterior decoration is not in cut brick. The different tiers of its superstructure consist of moulded terracotta slabs with figures of Buddhas seated in the *bhūmisparśa* and *vyākhyāna mudrās* in alternate rows (Plate LX, *b*). On the top of the basement moulding is an inscription (Plate LX, *d*) which records in the characters of the 10th-11th century that the gift was that of the elder monk (*sthavira*) Praśāntamati.

Minor Finds during 1932-33.

Apart from the find of the terracotta seals containing the effigy of Tārā, the most important discovery of the season was that of *several thousands of miniature votive stūpas* made of clay, deposited at the bottom of the relic chamber of a votive *stūpa* of considerable size (10′ 9″ square) in the south-east courtyard (Plate LIX, *a*). This particular *stūpa* was selected for being opened on account of its conspicuous position and its special external decoration which included torus and dentil mouldings. Within 2 feet from the top, a regular brick-built chamber (3′ 6″ square) was discovered, the walls of which, as the digging proceeded deeper, continued to widen with offsets below. Inside the pit pure, dark alluvial clay (such as was used for filling the cavity in the middle of the Main Temple) was found. When digging was continued to the level of the surrounding ground it was discovered that the whole of the interior was closely packed with miniature votive clay *stūpas* which it was very difficult at first to separate one from another; once separated they quickly hardened. Each of the *stūpas* must have been regularly moulded into shape before depositing, and the traditional type of the *stūpa* with a broad moulding at the base, a cylindrical drum, a square *hti* and a pointed finial (Plate LIX, *b*) appears to have been maintained even at this late period although structural examples of this type must have ceased long ago. The soft plastic mud of the *stūpas* has evidently been given a touch of reddish burnt-brick powder so as to give the surface a finish. When broken each one of these miniature *stūpas* was found to contain two small circular clay tablets with a minute inscription (Plate LIX, *c*) which can distinctly

be made out in some of the specimens as the Mahāyāna Buddhist formula beginning with "*ye dharmā*". At a time when the relics of the human Buddha were unobtainable, it is no wonder that instead of his corporeal relics (*dharma-śarīra*) the essence of his teaching was looked upon as a kind of embodiment of the Master; and the consecration and offering of such miniature *stūpas* must have afforded to the pious devotees an easy way of acquiring religious merit. Such *stūpas* encasing the Buddhist creed have been found also at Nālandā, Mīrpūr-khās, Sārnāth and other Buddhist sites.

Three terracotta plaques with the figure *of the Buddha* in meditation (Plate LIX, *d*) discovered at the Satyapīr Bhīṭā are also remarkable on account of the inscribed seals which were encased in them. When one of these plaques was being washed, it was found that on the back there was a circular hollow, $\frac{3}{4}''$ deep, filled with earth, which when removed, disclosed the existence of two seals ($\frac{7}{8}''$ dia.) placed face to face. Apparently the clay seals were placed inside the cavity before the plaque was fired, as they are partially burnt. In the other two plaques only one seal was found in each, and the inscription is the usual Buddhist creed formula (Plate LIX, *e*), found often on bronze images from Nālandā, Chittagong and Paharpur. But the inscription on the double seals (Plate LIX, *f*) discovered in the first Satyapīr Bhīṭā plaque provides a hitherto undeciphered formula or prayer, which was found also in other tablets of Bodh Gayā and Nālandā and appears thus to have been widely known and popular among the adherents of later North Indian Buddhism. Among other antiquities found during the excavation mention must be made of several loose terracotta plaques representing an ascetic warrior in a forest (probably Rāma in exile); a number of crystal beads; a bronze statuette of Jambhala; some curved bricks; and a number of finials which must have been the crowning ornaments of the votive *stūpas*. On the whole, the results of the first season of excavation at Satyapīr Bhīṭā have been very satisfactory in spite of a reduced grant amounting only to Rs. 1,600 being available for the work.

The Completion of the Operations during 1933-34.

During the season 1933-34,—reports Mr Dikshit,—the excavations at the Satyapīr Bhīṭā, Paharpur, were completed, thus bringing to a successful conclusion the operations at this site which were carried out every season since 1925-26. It is now clear that with the exception of some structures at the southern extremity of the Satyapīr mound—which appear to have been rooms set apart for residential purposes—the entire enclosure, 298′ in length and 142′ to 186′ 6″ in breadth, was occupied by religious buildings, consisting of *a central temple* (with its sanctum, pillared hall, circumambulating passage and vestibule), surrounded by rows of votive *stūpas*, large and small, square and round, plain and ornamented, occupying most of the available space in the enclosure (Plate LXI, *a* and *b*). The total number of these *subsidiary votive structures* in the compound is 132. At first it appears that the devoted worshippers erected small votive *stūpas* in the immediate vicinity of the central temple, either singly or in groups situated on a common platform. When further need for development was felt,

a boundary wall was set up in the east and west, and the fresh rows of *stūpas* constructed afterwards conformed to the orientation of the boundary wall (Plate LXI, *a*) rather than that of the central shrine. To the south, the boundary wall just touched the existing *residential blocks*. Of these the one at the south-eastern extremity consisted of a corridor, flanked by three rooms on the south and north. The other one standing due south of the central temple served as an Entrance Hall (Plate LXI, *b*). A fine brick-on-edge pavement in front of the latter building shows the importance attached to this Entrance Hall in the latest period.

In plan the votive *stūpas* show a marked similarity, the commonest type being square (11′ 3″ square) with a shallow projection in the middle of each face (Plate LXII, *a*). Sometimes there are two projections on each side, while about a dozen *stūpas*, mostly on the west of the temple, are circular in plan (Plate LXI, *c*). In a separate rectangular enclosure at the northern extremity of the site is found a large solid circular structure, probably a *stūpa*, with small circular structures attaching. Another round structure to their east seems to be hollow inside with a concrete lining, probably intended to be used as a kiln. Except the one *stūpa* on the south-east—which last year yielded thousands of miniature clay *stūpas* deposited as votive offerings—no other find was made inside the votive *stūpas*, although in several of them an inner hollow chamber was found. A few more terracotta sealings impressed with the effigy of Tārā, and three rather remarkable pieces of *glazed polychrome pottery* with chocolate coloured and white floral ornament, or white and green foliated leaves on a brown background (Plate LXII, *c* and *d*) were the finds of importance from this year's excavation. It has now been established beyond doubt that in the late Pāla period the temple construction followed a rectangular plan with a shrine, antechamber and hall in succession, like in the prevalent north Indian or 'Nāgara' style of architecture. The 'Sarvatobhadra' type adopted in the Main Temple at Paharpur does not seem to have been followed either in this or other structural temples brought to light by excavations of this period[1].

[1] It is not quite right, I suggest, to write, as Mr Dikshit does, "North Indian *or* 'Nāgara' style". The term *nāgara* literally means 'townish, urban', and the real meaning of this expression is still under discussion. In the *Vishṇudharmottara* mention is made of four kinds of paintings, *viz.*: *satya*, *vaiṇika*, *nāgara* and *miśra*. Dr Coomaraswamy in an article in *Rūpam*, no. 37, pp. 24-29, translates these as 'pure, or sacred', 'lyrical, 'secular' and 'mixed'. According to him the term *nāgara* "applies primarily to secular painting executed by amateurs". *Vide* also *Rūpam*, no 40, pp. 127-129. Whether this well-supported explanation will be accepted or not, the text of the *Vishṇudharmottara* evidently does not oppose *nāgara* to southern, western or eastern styles; indeed, it is likely that there is a scale in that enumeration, *satya* being the purest and most exalted style ('classical'?), *vaiṇika* coming next and *nāgara* ('urban, secular') third, leaving *miśra* at the bottom of the scale. Another explanation is offered by Mr S. Krishnaswami Aiyangar in an article in the *Journal of the Indian Society of Oriental Art*, vol. ii, no. 1 (1934), pp. 23-27. His explanation is wholly unacceptable. It is based on one single text, and that one abounds in illusory and theoretical " categories" in order to satisfy the system of *gunas* with which everything on earth and in heaven most correspond: a typical instance of the tendency of some ancient Indian scholars to 'systematize' and put everything into 'categories', from mathematics to the art of love. The text in question 'hangs in the air', as it were; as no monument in existence corresponds to its *purely theoretical categories* which leave time and development of styles entirely out of consideration. Dr P. K. Acharya collected a large number of quotations in his *Dictionary of Hindu Architecture*; see *sub voce*. These texts are extremely contradictory and leave one more baffled than before. The list of places called Nāgara on p. 309 of that work shows that Nāgara is no more North Indian than Southern; indeed, among two dozen others, "it is the name of an extensive division in Mysore". I feel quite unable to decide in this question. The other term used by Mr Dikshit is *sarvatobhadra*, literally 'pleasing everyone', or 'pleasing all over, everywhere'; but again a reference to the quotations given by Dr Acharya *sub voce* will show that this term too means a whole host of things. These include a phallus, a pavilion, a village, an entablature and many more fundamentally different works.—*Editor.*

After writing the above note I received a *Bulletin of the Madras Govt. Museum* entitled: *The three Main Styles of Temple Architecture recognized by the Śilpa-śāstras* by F. H. Gravely and T. N. Ramachandran. This excellent monograph definitely proves now that the term *nāgara* does *not* mean Northern at all.—*Editor.*

The Quadrangle of Paharpur.

In the main enclosure of the great Paharpur monastery the only work done during the year consisted in tracing the drainage channels from the antechamber, and the clearance of the high land between the Main Temple and the southern side of the monastery. In clearing the basement walls of the Main Temple, in the north-west and in the south-east corners stone gargoyle-heads with stone covering slabs came to light. Tracing the channels back to their beginnings, it was discovered that well-built masonry drains formed part of the original construction of the Temple, and that starting from the floors of the antechambers at each cardinal point they were carried underneath the floors of the circumambulating passage and through the walls and floor of the first terrace verandah (Plate LXII, *c*) to the corners of the basement walls. The principal drain appears to be that which carried away water from the northern antechamber. Its discharge end is marked by the best preserved stone gargoyle[1]; and the water issuing from the mouth was carried by a masonry drain beneath the floor (Plate LXII, *b*), outside the enclosure wall which runs parallel to the basement of the temple. The channels from the east, south and west antechambers were diverted to the north-east, south-east and north-west quadrants respectively; but no drains existed for carrying the water out of the compound wall, which shows that the quantity must have been moderate.

The discovery of some *terracotta plaques* in the coping or cover of the original drainage channel from the southern antechamber indicates that terracotta plaques, probably rejected, were freely utilized during the construction of the Main Temple and cannot be regarded as of later date. It is also clear that the actual worship, including washing and lustration of images, in the Main Temple must have been confined to the antechambers, and in the monastery to the central blocks on the east, south and west sides, as nowhere else have such carefully constructed drainage channels been brought to light. A bronze bell and a copper *chaitya*-shaped ornament with a fine pinnacle and with a pair of garments as if hanging on the sides, which were found in the clearance of the drain in the northern antechamber, support this conclusion.

The area south of the Main Temple which was further cleared during the year revealed the existence of a *Large Hall,* with side rooms used for some such purpose as cooking, washing, *etc.* Immediately to the east of this area are a masonry and two ring-wells in a row, and beyond is a Large Hall (to which reference has already been made) which may have been used either as an *Assembly Hall* or a Refectory. Access to the well area was obtained by a few steps and it appears that a large quantity of water was used inside this building, as we find a number of shallow U-shaped drains in the interior (Plate LXI, *d*). A number of rough brick pillars at regular intervals on the north, east and west, outside the walls of the Assembly Hall may be taken as supports for the roof of the verandah. The Assembly Hall is of such dimensions (46′×29′), that its span is unlikely to

[1] The gargoyle in the plate is in the shape of a monster. It seems to me very likely that the Gothic and later gargoyles are an importation from the East—as so many other elements of the Crusades and the Middle-Ages.—*Editor.*

have been covered by the methods of permanent roofing in vogue at the time[1]; and it is possible that it was used as a dining hall in fair weather only. In the southern rooms, it is still possible to trace fire-places in the shape of several rows of large-sized bricks laid horizontally, one above the other. During the latest period of occupation, this area along with the other hall on the east was filled up with huge quantities of broken pottery and other rubbish and a brick-on-edge floor was laid, which is in parts visible.

EXPLORATION AT OTHER SITES IN THE EASTERN CIRCLE.

By Mr G. C. Chandra and Mr K. N. Dikshit.

The Mound of Halud Vihāra near Deepganj.

In pursuance of the request made by Mr H. E. STAPLETON, Director of Public Instruction, Bengal, Mr G. C. CHANDRA visited during 1930-31 a mound locally known as *Halud Vihāra*, situated close to the market-place of *Dvīpganj* (*vulgo:* Deepganj), in the Rajshahi District of Bengal, about eight miles to the south-west of Paharpur. The mound which measures about 215 feet from east to west and 135 feet north to south, rises to a height of about 35 feet from the surrounding ground level, and ancient structures have been exposed here and there at its foot by brick-hunters. A *miniature bronze image of Gaṇeśa* (ht. 2·5″) was discovered by a Muslim in one of these diggings (Plate LXII, *f*). The god who sits in the *mahārājalīlā* posture, has four hands holding a trident and a half-blown four-petalled flower in his upper hands, and a creeper-like thing (*kalpa-latā* ?) and sweets in his lower right and left hands respectively. His vehicle, the rat, is seen below his right foot, looking up. The trunk is bent up towards his right truncated tusk: an unusual feature in most of this god's images. It may be assigned to about the 8th to 9th century A.D. The local people associate this place with Buddhism, and the name *Halud Vihāra* itself justifies such a conclusion. It is not unlikely that the site, which is more or less like the main mound at Paharpur, may yield important antiquities if excavated systematically.

Mahāsthān.

As in the year 1929-30, one more terracotta figurine of the Śuṅga period[2] was found at *Mahāsthān-garh* in the Bogra District in course of digging an outlet for rain water during 1930-31 (Plate LXII, *g*). This find helps us to confirm the fact that Mahāsthān represents one of the earliest city-sites of Bengal, and was in occupation from the 2nd century B.C. to the 12th century A.D.

On November 31st, 1931, almost on the surface of the earth a small fragmentary stone slab bearing six lines of a *Mauryan inscription in Brāhmī characters*

[1] Mr CHANDRA, however, reported that he found charred wood in this structure; this makes it likely though not certain that wooden beams were used to roof the building.—*Editor.*

[2] This burnt clay figure of a female deity may be even older than the author suggests. As far as visible in the photograph, it may be as old as the Maurya period.—*Editor.*

has been discovered and created considerable interest amongst the scholars in Bengal. In addition to the identification of Mahāsthān with the ancient *Pundranagara* or *Pundravardhana*, the date of the site has been pushed back to the 4th century B.C., *i.e.*, two centuries earlier than that suggested above on the strength of a terracotta figurine of the Śuṅga period discovered here during 1930-31. The inscribed stone was found by a labourer employed by the owner of a plot of land. This plot stands near the site excavated by the Archæological Department.

During the year 1932-33 a fragmentary image of Hara-Gaurī (Plate LXIII, *b*) in black basalt was reported to be lying with the *Khādim* of the tomb of Shāh Mahīśvar at Mahāsthān. Mr DIKSHIT inspected the relief which is only 1″ thick; the height of the existing portion up to the waist of the god is 1′ 6″. Śiva is depicted, as usual, with four hands, of which the two upper ones hold the *triśūla* (trident) and *utpala* (blue lotus) respectively, the lower hands touching the chin and breast of the goddess respectively. The figure of Gaurī is, as usual, characterized by the holding of a mirror; the figures of Gaṇeśa and Kārttikeya are on the top of the back slab. The trefoil arch over the head, the flying streamers, the geese on the sides, and the *kīrtimukha* at the top point to the 11th century A.D. as the period of the relief. It was not found possible to acquire the piece for the Indian Museum as it has been a source of income to the owners who exhibit it to pious pilgrims attending the periodical bathing festivals.

Images of the Kāmākhyā Hill, Assam.

A number of figures cut in the rock in the hillside close to the way leading from Pandu to the hill-top were examined during the year 1932-33. A large rock-cut figure of Gaṇeśa with a number of miniature *śikhara* shrines and Śiva-*liṅgas* are conspicuous near the stone gateway on the western slope. The Gaṇeśa has during the last few years been receiving the attention of some devotees who have erected an ugly corrugated iron shed and a small mud-plastered cell in front. It would be advisable to bring the other rock-cut *liṅgas*, shrine, *etc.*, within the Ancient Monuments Preservation Act before the remains are lost. Another interesting rock-cut figure shows the eight-handed *dancing Bhairava* locally known as *Bāla-bhairava*. With his hair arranged in a double circle of ringlets over the head, Bhairava striding over a prostrate person and wearing a garland of skulls is truly terrific (Plate LXIII, *a*). Other examples of the Assam school of sculpture that flourished in the 10th-11th century may be studied in the so-called Durgā image and another female figure to the right of the tank in the compound of the Bhairava temple. A seated male figure to the left of the tank in the Bhairavī temple (Plate LXIII, *c*) is a representative example of the style of Kāmarūpa, particularly in the delineation of the drapery and ornaments; while the so-called bust of Jarāsandha in a niche by the side of the stairs leading to the Kāmākhyā temple from the west is another good though obliterated example of the same style. All these have been examined by Mr DIKSHIT during 1932-33.

The śikhara-Temple at Mathurapur.

To the keen interest and enthusiasm of Mr G. S. DUTT, I.C.S., Bengal, we owe the addition to the history of Bengālī architecture of a remarkable monument visited by Mr K. N. DIKSHIT during 1933-34. This is a massive brick temple at Mathurapur, in Faridpur District, in Lower Bengal, locally known as a *deul*, rising to a height of 70′ (Plate LXIII, *d*) with a diameter of 12½′ at the base, access to the temple being provided by doors on the south and west. It is dodecagonal in plan, and the *śikhara* is characterized by a number of horizontal, raised mouldings (Plate LXIV, *b*) decorated with floral tracery, whilst the deeper layers between these ridges show rural scenes, *kīrtimukhas*, leogryphs and a number of mythological scenes from the *Mahābhārata*, *Rāmāyaṇa*, *etc.*, as well as floral and geometrical patterns. The carvings reflect great credit on the artists, many of the figures and scenes depicted in the reliefs being more lively and vigorous than usually found in the decoration on the 16th and 17th century temples in Bengal. In general the monument bears affinity to the Ichhaighosh and Buddipur temples in the Burdwan district, but most of all to the *maṭh* at Kodla in the Khulna district, which has been assigned to the 16th century A.D. The Mathurapur temple (which in all probability was also a *maṭh* or commemorative monument) in the general appearance, the ornamental false doors, the number of square holes in the exterior surface bears a strong likeness to the last-named monument and has to be attributed on grounds of style to the same period. Steps are now being taken to bring this interesting monument under the Ancient Monuments Preservation Act.

The 'Curved Cornice' Temple at Handial.

Although several temples of the Bangla or curved cornice type have been preserved in South Bengal, the temple at Handial in Pabna district, which has been taken under protection during the year, is of considerable interest from the artistic point of view. The façade (Plate LXIV, *a*) of this brick and terracotta temple with its wooden panel doors ornamented so as to match the rich carvings on the door frames, pilasters and friezes on the basement, invests it with an importance in spite of its comparatively recent date (end of 17th or beginning of 18th century). The carved panels represent scenes of fighting and other mythological scenes and single figures in the typical delicate terracotta work for which the Bengal artist has always been famous.

EXCAVATIONS AT NĀLANDĀ.

By Mr M. H. Kuraishi and Mr G. C. Chandra.

Preliminary Remarks.

Excavations were continued during the four years under review at the now once more famous Buddhist centre of learning, the Monastery and the Monastic School of Nālandā in Bihar.

Mr M. H. KURAISHI was in charge of the operations during 1930-31 and 1931-32, and Mr G. C. CHANDRA during 1932-33 and 1933-34. The reports submitted by them have been considerably altered and abbreviated by the present Editor. A number of minor finds will be found described in Section 'Museums' under the heading "Nālandā Museum". The original grant of 1930-31 amounted to Rs. 20,000, next year only Rs. 4,000 were allotted. In view of the magnificent find of bronzes and stone images during 1932-33, Government have raised the grant of Rs. 3,000 to Rs. 5,000 for the year 1933-34. It may be mentioned in this connexion that it would be logical to surmise that even more valuable finds could be made with generous grants than with a depleted purse.—*Editor*.

Work during 1930-31: Chaitya Site No. 12.

About 100 yards to the north of the Stūpa Site No. 3 was a large mound (Plate LXV, *a*) concealing the remains of a structure which had suffered heavily in the seventies of the last century when a Sub-Divisional Officer of Bihar carried out haphazard excavations at Nālandā and left the ruins to the ravages of the neighbouring villagers and treasure-seekers. In the year 1930-31 Mr M. H. KURAISHI cleared the greater part of this mound and, besides other structures, unearthed the *remains of a large shrine.* This shrine shows two different levels of construction: a later building constructed directly over the ruins of an earlier one. (Plate LXIX.)[1]

Both the earlier and the later structures are square in plan with rectangular projections at the corners and a broad flight of steps in the middle of the east side. In the centre of the upper level structure and facing the flight of steps is *a shrine of massive construction,* at present measuring 21 feet square internally; it has been slightly reduced in length by means of two narrow walls built inside it close against the north and south walls at a later period. A few stone slabs and column bases in front of the shrine entrance on the east mark the position of a porch. The massive brick walls of this shrine were made still more massive at a later period by the addition of a solid upper layer the exterior face of which was decorated with heavy mouldings, pilasters and niches, the latter containing stucco images of the Buddha, Kuvera and others, all more or less damaged. An even later construction, however, against the north, south and west walls concealed these decorative features, and further reduced the width of the *pradakshiṇa* path to 9½′ only on each side. The *pradakshiṇa* passage is surrounded by a parapet wall on all sides built exactly above the exterior walls of the earlier structure, and its concreted floor is provided with stone lips at intervals for the discharge of rain water towards the outside. (Plate LXV, *c*).

Inside each of the four corner shrines was a cult image of stucco of which only the pedestals, and in some cases also the legs, are extant. *Two well-carved stone pillars* (height 7′ 7″ each) and a stone bracket (2′ 6″×9″×7″) were found

[1] Unfortunately, this *chaitya* site is described in the plan as *stūpa* site. This mistake occurs in several places in the drawing; the words "earlier *stūpa*", "later *stūpa*" should all be read "earlier shrine", "later shrine"; not, however, the legend "Votive *stūpas*" which is right. The Editor very much regrets that he was unable to replace the drawing by a fresh one; but he had to choose between a footnote or a long delay. Readers will understand him when he says that he preferred the footnote.—*Editor.*

lying in front of the shrine at the south-east corner. These seem to have fallen from a platform in front of the shrine which evidently formed the plinth of a porch. (Plate LXV, *d*).

Of the earlier structure of the main shrine the entire length of the south front and a considerable portion of the west front have been uncovered (Plate LXVI, *a* and *b*). These unlike the upper level shrine façades, which are quite plain, are decorated throughout with projecting niches and pilasters of various patterns.[1]

Excavation in the area south-east of the Chaitya Site No. 12 brought to light *a number of square or circular votive stūpas* decorated, as usual, with mouldings and niches, *etc.*, with stucco images in a few of their niches, and a few also bearing inscriptions. (Plate LXV, *b*). The small stucco images in the niches of the brick *stūpas* are in a very poor state of preservation, almost all of them having crumbled away.

To the west of the votive *stūpas*, on a higher level, and approached by a flight of steps from the east, is *a detached shrine* situated in the middle of a large compound and containing in its cell *a colossal stucco image of the Buddha* (6′ 7″ high) seated on a pedestal in the *bhūmisparśa-mudrā* (Plate LXVI, *d*). The head is, unfortunately lost, and almost all the exterior coat of stucco has disappeared, leaving only the rough mould of a trunk of mud *in situ*. Small fragments of stucco, however, still adhere to the body here and there and show traces of a red paint.[2] The pedestal and legs are better preserved; but the attendants on either side of the pedestal are badly damaged and fallen sideways. Behind and below the principal image are traces of a lion; and above it an elephant on the right and a lion on the left.

Stūpa Site No. 3.

The high ground to north of the Stūpa Site No. 3 was cleared for a distance of some 15′ farther north. The excavation revealed what appears to be the south wall of a structure with a projecting stair in the middle, and square projections at the ends, all decorated with pilasters, panels and images in stucco. At the west end of this wall was found a small narrow stair. The concrete treads of the stairs as well as the images on the walls are much damaged.

Monasteries 7, 8 and 9.

The passage between Monasteries 7 and 8 was cleared of *débris* right down to the level of the original brick pavement, so that it is now possible to have direct access to the stone temple in Site No. 2 from the central avenue in the middle of the site. The passage between Monasteries 8 and 9 was partly cleared of *débris* to facilitate conservation work on the north external wall of Monastery No. 8. Similarly a space of 12′ was cleared along the east front of Monastery No. 8 to carry on conservation work on the east enclosure wall of the building. The wide passage of 22′ from Site No. 1 to Site No. 6 was continued to the northern

[1] It seems very likely that the faces of the walls shown in Plate LXVI, *a* and *b* were originally covered with ornamental plaster.—*Editor*.

[2] The red paint, usually minium, must have been the foundation of gilding, as so often at other Buddhist sites We can thus visualize the impressive image of the Enlightened One, calling the Earth to witness,6′ 7″ of glittering gold.—*Editor*.

limits of Monastery No. 8. This work was useful inasmuch as the whole of the west façade of Monasteries 7 and 8 was completely exposed to view, giving it a more imposing appearance than ever; and at the same time the earth needed for making special size bricks for conservation work was obtained with comparative ease.

Site No. 2.

A quantity of spoil earth was removed and a passage of 27′ cleared from the south front of the Stone Temple in Site No. 2 in order to enable the visitors to have a clearer view of the structure from the parking ground provided at the west end of the new approach road to the site. (Plate LXVI, *c*).

Operations during 1931-32: The Chaitya Site No. 12.

The excavations at this site were continued during 1931-32; and the north half, which was left intact before, has now been thoroughly cleared. A small length of the later period envelope, which surrounded the shrine and hid its ornamentation of niches, pilasters and images, has been exposed this year on the north façade; here this additional wall-covering had been damaged by the fall of the superstructure caused by earthquake or some other natural catastrophe (Plate LXVII, *a*). Yet the collapse of this superstructure did not damage very much the stucco-decorated face of the earlier niched walls the remarkable style of which can be well seen in Plate LXVII, *c* and *d*.[1]

The excavation of the step projection on the Main Chaitya brought to light traces of a concreted ramp at the highest level; this seems to have served as a means of access to the shrine when the width of the *pradakshiṇa* was reduced to 10′. Underneath this ramp was discovered a broad flight of steps which no doubt was contemporary with the later level Chaitya; and beneath these another flight of steps which was evidently constructed at the time the lower level structure was intact. (Plate LXVII, *b*). In neither of these two stairs are the steps covered with concrete as is the case in other buildings unearthed at this site. A pit dug down this year in the centre of the shrine in the hope of securing possible relics revealed, at a depth of some 20 feet below the concreted surface of its floor, the rough-built face of a brick wall on the east with what appears to be a blocked up opening or perhaps the back side of a niche in the centre. This evidently belongs to the earlier level Chaitya.

The surmise that the shrine contained an image of the Buddha or some Buddhist deity, is to a certain extent supported by the presence of several small drains running from the corners and sides of the shrine right through its solid massive walls in several directions. Their course is almost level and their dimensions uniform throughout; it is, therefore, possible that they might have served for ventilation. These drains are constructed on the principle of corbelling and are 8 to 12 inches wide and about the same in height. One of them is 2′ 9″ above the concreted floor of the shrine and another about 17′ above the floor, the latter

[1] Though evidently full of reminiscences of classical ornaments, this wall-decoration is a typical example of folk-art; in its almost childish simplicity it is a delectable piece of work, and unique in Indian art history.—*Editor.*

probably belonging to the upper storey of the shrine. No traces of any roofing slabs, timbers or tiles have been recovered from the shrine, from which it may be surmised that the interior must have been cleared of all original *débris* along with the antiquities by the treasure-hunters of the last century and filled in with spoil earth and brickbats afterwards. As mentioned already, the original ruin of the Chaitya seems to have been caused by a natural catastrophe such as a severe earthquake shock. An interesting feature revealed during the removal of the *débris* caused by the collapse was a concreted *pradakshiṇa* path, 10′ 8″ wide, with traces of stone lips at the edges for draining away rain-water. This *pradakshiṇa* is 15′ above the level of the lower *pradakshiṇa*, and this shows that *the shrine of the Chaitya was a two-storeyed structure.* Unfortunately the havoc wrought by Mr BROADLEY's haphazard excavations in the seventies of the last century was so great that the *pradakshiṇa* can not be traced on other sides.

In order to prevent any harm coming to the structure through absorption of rain-water in the foundations, the little open space around the structure has been sloped outward and southward so as to allow rain-water to flow away easily into the forecourt containing votive *stūpas*, and thence into the large *kacchā* drain between Sites No. 3 and No. 12, finally to discharge into the tanks on the west of the site.

A piece of high ground immediately north of the Main Chaitya in Site No. 12 which outwardly appeared like a mound of spoil earth only, was also excavated. The excavation brought to light the remains of *a large detached shrine* similar to that found last year on the south side of the Main Chaitya with the remains of a *colossal stucco image of the Buddha* inside. In the immediate vicinity of this shrine, and slightly to the south-west of it, was found *another shrine* of much smaller dimensions, and inside it was a fine standing *stone image of the Bodhisattva Avalokiteśvara* which seems to have originally belonged to an earlier structure. The image is perfectly intact and 5′ 1″ high, including the pedestal, which is made of a separate block of stone; and since it was comparatively easy to carry it has been removed to the Museum and deposited there. (Plate LXVIII, *a*).[1]

Monastery No. 7.

The only other excavation work carried out at Nālandā during 1931-32 was in Monastery No. 7 where all the monks' cells in the north half of the monastery—16 in number—were exposed and excavated down to the lowest level structure and filled up again to the level of the latest concrete pavement. This was done in the hope of recovering antiquities that might be buried in the *débris*, especially in the lower levels, but the operation did not meet with any success in this respect.

[1] This magnificent image, in a splendid state of preservation, is no doubt one of the finest sculptures of that heyday of Indian art, the Gupta period. What strikes us from the technical point of view is the perfect mastery of the material and finish unparalleled in any other period of Indian art except the Mauryan age. From the artistic point of view it is the dignity, simplicity, restraint and nobility of line, form and expression. Ornaments (so profuse in other periods of Indian art) are restricted to almost nothing; and where they are present they only emphasize the superior ease of the pose; this latter feature (among others) dates the image as 'classical,' *i.e.*, 5th century A.D., and not later when the posture became more and more baroque,' *i.e.*, more bent.—*Editor.*

Excavation during 1932-33: The Monastery Site No. 9.

During 1932-33 the work of excavation was concentrated at the Monastery Site No. 9, situated at the northern end of the row of Monasteries, all facing west, and which had been brought to light previously (Plate LXX, *a;* see also the general site-plan of Nālandā, Plate LXXI).[1] The plan of the Monastery No. 9, measuring 208′ 1″ in length from east to west, 171′ 6″ in breadth and 6′ in height on an average, is on the whole identical with that of the monasteries revealed previously (Plate LXX, *b*). It faces west, and the main entrance doorway in the centre was constructed of stones as proved by the broken pieces of stone lintels lying *in situ*. The 37 cells are of an average dimension of 9′ 3″×9′; the main shrine measures 19′ 5″ in length and 14′ in breadth. There is a main entrance in the west row of cells; two store rooms without doors next to it; verandahs on all four sides in front of the cells; an open brick-paved courtyard with three sets of double *chūlhās* spaced 45′ apart; an octagonal well 7′ in width inside, built of brick laid in horizontal and vertical courses in an ornamental fashion; and a brick-built drain covered with stone slabs. All the cells have one door-opening and were apparently without windows; but the staircase at the south-west corner has a window, 3′ 7″ wide, in the west wall. This staircase, 7′ 10″ in width, had wooden planks for its treads and nosings (10½″), and these latter were in their turn resting on and fixed into the brick hearting and side walls of the steps. The sill of the window was bevelled inside to light the landing fully (Plate LXX, *d*). (A similar window appears above the landing of the staircase situated in the south-west corner of Monastery No. 4 excavated previously). The sills of the doors to the cells were also made of wooden planks. Evidences of such construction are charred pieces of wood in most of the cells. Vertical charred blocks of wood were also brought to light from the bases of almost all the pillars of the verandah, and this proves that its roof was supported by wooden pillars on separate stone bases (Plate LXX, *c*). It is, therefore, not improbable that the building was destroyed by fire.

Another point noticed was the method of roof construction over the cells and over the verandah in front of them. This roof very likely served as a floor for the rooms and verandah on the *first floor* to which access was gained by the staircase. This roof, or floor, was constructed of beams, *bargās*, long bricks, and a layer of concrete 10″ in thickness on an average. Charred pieces of wood were also recovered from the floors of some of the cells.

Other features of the ground floor worth mentioning are the construction of the court and of the drain. The former was paved throughout with almost square brick tiles laid on a layer of concrete in several regular compartments made of brick-on-edge partitions. The *drain* exposed at the north-east corner of the courtyard runs through the width of the eastern verandah and the second cell from the extreme north in the eastern row of cells, and falls into the rear side of the monastery. The mouth of the drain was subsequently extended towards the open courtyard to meet the necessity of a later structure erected at the

[1] This site-plan was prepared before the excavation of Monasteries 9 and 10 (1932-33 and 1933-34); I am, however, publishing it as the most comprehensive plan of the whole site so far prepared. It represents the state of operations up to the end of 1931-32, and I have written into the empty spaces the dates of later diggings.—*Editor.*

north-east corner. The position of *the octagonal well* is found to be slightly different from those uncovered in the courtyard of other monasteries, as it is more towards the eastern corner than usually. The north end of the western verandah was blocked up at a later period to form a separate cell being provided with a small corbelled door of a height of 4′ 1″ below the corbelling. Some of the doors of the cells were similarly bricked up in regular courses at a later period. Near the middle of the north verandah there is a small brick *chūlhā* (oven) of the common type measuring 2′ 6″ in length and 1′ 5″ in breadth and 9″ in height. It is rather curious that only one *chūlhā* is found in this verandah. The main shrine in the middle of the eastern row of cells does neither contain any platform for an image nor a *pradakshiṇa patha* as seen in other monasteries. Trial pits sunk in the floor of the shrine revealed the existence of another concrete floor at a depth of 3′ 3″ below the top floor level.

To examine the nature and construction of the foundation, trial pits were sunk on the north, east and south sides of the external walls of the Monastery No. 9. These diggings brought to light the fact that alternate layers of one or two courses of bricks, and of sand 2″ to 6″ in thickness, were used in the construction of the foundation of the building. This particular method was evidently adopted by the builders to prevent unequal settlement of its walls, and to make them damp-proof as far as possible.

Judging from the details of construction, the various finds of bronze and stone images recovered from this site, and also the brick-paved courtyard as compared with those revealed in Monasteries 6, 7 and 8, it may well be stated that *Monastery Site No. 9 belongs to the Devapāla period.*[1]

During the excavations under report in this Monastery, a large number of antiquities have been unearthed comprising 75 bronze and stone images, clay seals and sealings, terracotta plaques and pottery of different types, iron straps, nails, padlocks, beads and various other objects of clay, stone, ivory, iron, bronze, brick *etc.;* these were removed to the small Archæological Museum at Nālandā for cleaning and exhibition.

A description of some of the interesting finds recovered during 1932-33 is given under the Section 'Museums'.[2]

Operations during 1933-34: Monastery Site No. 10.

During the year 1933-34 the work of excavation was concentrated on exposing Monasteries 10 and 11, which stand immediately to the north of Monastery No. 9, and are in the same row of monasteries along the east side. The external walls of Monasteries 10 and 11 had been traced on the east and west sides in previous years by means of sinking on each side a narrow trial trench which was carried due northwards. During the year under report, the whole of Monastery No. 10, and a portion of Monastery No. 11 were brought to light.

[1] *I.e.*, the middle of the ninth Christian century. According to Dr H. C. RAY:—*The Dynastic History of Northern India*, vol. I, pp. 292-296, Devapāla reigned from c. 815 to 854 A.D. But there are plenty of arguments for a longer reign, one being TĀRANĀTHA's testimony of a reign of 48 years, the other the fact that next to nothing is known about the date of accession of Devapāla's "shadowy" successor, Vigrahapāla I.—*Editor*.

[2] The most outstanding bronzes found in Monastery No. 9 are illustrated in Plates CXXXIV to CXXXVII.—*Editor*.

Monastery No. 10 measures east to west 209′ 9″ and 173′ 9″ north to south (Plate LXXII), and Monastery No. 11 is about the same size; their plans are more or less identical with those of the monasteries excavated in previous years at this site. The buildings consist, as usual, of a spacious brick-paved courtyard (sloped towards the north-east corner) in the centre, surrounded by a colonnaded verandah behind which is a row of monks' cells numbering 35 on all sides; there is the usual shrine in the middle of the east side and the main entrance is in the west row opposite to it. The buildings face the west, and the main entrance doorway in the centre was constructed of stone, as proved by broken pieces of stone lintels lying *in situ*.

The construction of the doorways to the cells in Monastery No. 10 (of an average dimension of 10′ by 10′ each) is slightly different from that of doorways uncovered previously in other monasteries. Fortunately, the door jambs are extant at some places up to the height of the beams. Instead of wooden scantlings as lintels over the doors, *regular arches were constructed over some of the cells* made of carved bricks set in mud mortar; similar to those discovered in the vault of the chambers in Monastery No. 1 (Plate LXXIII, *a*, *b* and *c*). These arches are of great interest for the history of architecture during the Buddhistic times.

In Monastery No. 10 some of the cell-floors are laid with concrete, while others have brick-on-edge flooring. On examination it appeared that not all the cell-floors of the building are at one and same level; some of the floors, especially those on the north row of the building, have been relaid at a subsequent date on a higher level. Another alteration of later date was the erecting of brick walls directly on the top of the plinth-parapet walls of the verandah enclosing the courtyard of the earliest period. Such additional walls are noticeable on the north-east corner of the building (Plate LXXIII, *a*) as well as on the west half of the south parapet wall (Plate LXXIII, *b* and Plate LXXIV, *a*) where the later structure runs directly over the earlier plinth-parapet wall; it thereby encloses the earlier verandahs at the north-east corner of the building as well as almost the entire south verandah.[1] The door-openings of some of the cells are found to have been blocked up by means of rough brick masonry; and this feature is most prominent on the south row of the cells of the building, where all the door-openings, except one or two, are blocked up. The blocking up of the doors in this fashion indicates the abandonment by the people of the earlier level building due to some cause or other; probably in order to construct a different and fresh building on the top of the earlier buildings. That *a fresh monastery was erected on the top of the earlier ruins* in Monastery No. 10 is certain; for, on the north-east, north-west and south-west corners of the building traces of cubicles with concrete flooring built directly on the top of the earlier monastery cells have been discovered. Evidences of this later construction are most prominent on the south-west corner, where ruins of no less than 4 cubicles and a portion of the concrete verandah in front of them are still existing.

[1] This curious structure, if I understand it, surrounded and almost entirely hid the cells from the view of those in the courtyard, and the question arises in one's mind whether such a *pardāh* wall was not in fact meant to give more privacy to nuns?—*Editor.*

On the plinth-parapet wall enclosing the courtyard, there are the usual stone pillar bases set at regular intervals, suggesting that the verandah was roofed. Whether the pillars were of stone or wood, there is no direct evidence left *in situ*. The courtyard itself is paved with brick and is divided into 16 regular rectangular compartments by brick-on-edge partitions, similar to those noticed last year in the courtyard of Monastery No. 9 (Plate LXXIII, *a* and *b*). At the east end of the courtyard stands *a brick shrine*, now in ruins, measuring 44′ 2″ in length north to south and 24′ in breadth (Plate LXXIII, *a*). There is a stairway of four steps on its west front. Both the shrine and the stairway show traces of earlier construction. In the south-west corner of the courtyard there is *another brick structure* with a flight of steps on its north front (Plate LXXIII, *b*). This was evidently constructed as a staircase to allow access to the cubicles on the first floor when the original staircase at the south-west corner was blocked up. Besides the latest period monastery. which has already been referred to above, it seems from the evidence obtained so far that additions were made to the cells situated on the north, east and south rows, as well as to the verandahs and the plinth-parapet wall of the courtyard; but the brick shrine of the courtyard must have been an altogether separate construction on the top of the earlier ruins. Definite evidence of these two periods of construction was found in the cells situated in the north row of the building where the masonry of the later period is distinct from that of the earlier one; the size of the doors to the cells vary considerably; and the external walls of the cells facing the verandah almost invariably jut out of the line of the earlier walls. There are further indications of later constructions inasmuch as one of the cubicles at the south end of the east row of cells, besides having the usual door-opening facing the verandah, shows another door-opening approached from the east front by means of a few steps which are still extant (Plate LXXIII, *d*); but both these door-openings have been blocked up at a later period. It seems, however, probable that *the present courtyard belongs to the earliest period* of occupation, *i.e.*, the Devapāla period; and that the later occupants found it suitable to use this courtyard, although the levels of the cell-floors and verandahs were slightly raised.

No trace of a well has been found in the courtyard, so that the occupants evidently had to draw water from the wells of the neighbouring monasteries, almost all of which had wells.

Another interesting feature of this monastery is an oblong stone platform (12′ by 7′) bounded by a stone curbing 9″ high, and provided with a small drain. (Plate LXXIII, *d*). This construction is probably *a bathing platform;* it occurs at the south end of the east front of the monastery and on the immediate south of the steps referred to. No such bathing platforms had been discovered in any other monastery exposed in previous years.

Monastery No. 11.

Monastery No. 11 was not fully exposed during the year under report, but the operations carried out so far brought to light a building that is practically

the same as other monasteries exposed in previous years. The entrance gate of this monastery faces the colossal stone image of the Buddha seated in the *bhūmisparśa mudrā*, commonly known by the neighbouring villagers as the image of *Bhairab*,[1] the ground surrounding the image being termed *Bhairo-sthān*. During the year 1933-34 portions of the east and west verandahs, the whole of the south verandah and the cubicles facing the verandahs were exposed; and the most noteworthy feature of these excavations was the discovery of *many stone pillars*, the majority of which were found *in situ* on the pillar bases of the verandah platform running round the courtyard. (Plate LXXIV, *d*). Almost all the pillars are, however, broken at present, due no doubt to the collapse of the building and the pressure of the *débris* above. It is, thus, evident that the roof of the verandah, and the upper floor (if any) in Monastery No. 11 was supported by stone pillars instead of wooden ones as in Monastery No. 9 exposed during the year 1932-33, and where remnants of wood proved the existence of wooden pillars. At the south-west corner of the building a stairway was brought to light with a window in the west wall (Plate LXXIV, *b*). This staircase must have been covered by wooden planks, as there is evidence of planks having been fixed into the brick hearting of the steps, and there are charred pieces of wood in all of them. As similar pieces of charred wood were found on the sills of the doors to the cubicles of the monastery, one is justified in surmising that this building too was destroyed by fire. Holes for the insertion of wooden beams or rafters were found in two places of the verandah walls (Plate LXXIV, *c*).

Further Work at Chaitya Site No. 12.

The excavation at Chaitya Site No. 12 is not yet complete. During 1933-34 the operations concentrated on exposing the moulded plinths of the structure on the north, west and south fronts. In the previous years a narrow trench only had been dug in order to trace the external walls, but the floor level of the earlier period had not been reached then. That narrow trench, about 10′ in width, was widened on the north, west and south fronts to about 30′ and it exposed a full view of the external walls. The trench was then dug down to about 15′ from the present level of the deposited earth surface, and this revealed almost the entire moulded plinth of the structure.[2]

Clearing the Grounds.

Besides the above digging operations, a great deal of labour was spent during the year 1933-34 on clearing the grounds of the site. Superfluous *débris* and rubbish, spoil earth and fragmentary bricks have been removed or stacked in a proper way, and temporary drains have been dug to carry off rain-water. This work involved more time and labour than may be apparent on reading such a brief summary.

[1] *I.e.*, *Bhairava*, "The Terrible," a form of Śiva, rather opposed to the Buddha!—*Editor*.

[2] Mr CHANDRA has done a great deal of conservation work at this site. See *suprà*, p. 29, under Conservation.

Minor Finds During 1933-34.

A large collection of antiquities was found during 1933-34 in Monasteries 10 and 11, comprising 104 bronze and stone images; clay seals; a hoard of 54 billon coins of the Hun dynasty; a rectangular gold-plated copper coin of the same time (Plate LXXV); pottery of various types; and other objects in clay, stone, brick, bone, iron, *etc.* These finds were removed to the Archæological Museum at Nālandā. The total number of minor finds registered stood at 171 (as against 215 of the last year). It is interesting to note that although a large collection of bricks (mostly broken and fragmentary) moulded with various types of animal and human figures were brought to light from Monastery No. 10, only one small bronze object could be found among the remains of this whole site. On the other hand a considerable collection of bronze images and other objects was found in Monastery No. 11, although the latter Monastery was not fully exposed during the year.

A description of some of the interesting finds recovered during 1933-34 is given under Section IV: 'Museums'.

OTHER EXPLORATION WORK IN THE CENTRAL CIRCLE[1].

The Inscription at Semarsal.

The Superintendent visited during 1933-34 Semarsal in the Bilaspur District where there is a slab of yellow jasper with an inscription (Plate LXXVI, *a*). Inked estampages of this inscription were sent for decipherment to Mr N. G. MAJUMDAR who reports as follows:

"The inscription from Semarsal is in Brāhmī characters of the first or second century A.D. and written in Prakrit. As a portion of it has been peeled off from the right hand side, it is not possible to restore the entire text. The opening words in line 1, which are in Sanskrit, read *siddhir-astu*, that is "May there be perfection". In line 2 occurs the title, *bhaṭṭāraka* ("lord"), but the name of the person to whom it was applied is missing. The inscription probably records the creation of a permanent endowment (*akhaya nīvi*) and the excavation of a tank (*vāpikā*) at a place called *Visagama*. Nothing further can be made out from the inscription."

Jaina Remains at Nanhwara.

At Nanhwārā in the Jubbulpur District Jaina images were found buried under the *débris* of a *kacchā* house. One of these images is almost intact and was found by the Superintendent standing under a tree near the village school (Plate LXXVI, *b*). It seems that it was part of a mural decoration, or anyhow of a door; and the central figure is that of a Jaina Tīrthaṅkara (Mahāvīra?) whose *vāhanas* are lions; flying female deities hold a three-tiered umbrella over him, and two elephants on the top pour water from jars held in their trunks. It is

[1] This chapter, though based on notes submitted by Mr H. KURAISHI, is entirely re-written by the present Editor.

a fine piece of sculpture, specially noteworthy as it is a Jaina image; and it can be dated with more or less accuracy to the 11th century A.D.

The same applies to the other, unfortunately very fragmentary, image of probably the same Jaina holy personage, illustrated in Plate LXXVI, *c*. This piece of sculpture again was probably portion of a more extensive decoration; it was found lying on the roadside in the village. Here the central figure is shown seated; but the *vāhanas* and other attendants are the same on the whole. Steps have been taken to remove these images to the Central Museum, Nagpur.

The Vishṇu Temple at Narayanpur.

The Vishṇu Temple at Narayanpur on the Mahanadi, Raipur District, which according to an agreement ought to have been kept in good order by the owner—the *mahant* of Sheorinarayan in the Bilaspur District—was visited by Mr G. C. CHANDRA in 1933-34 and found to be in a neglected condition and in urgent need of repairs. Local authorities were therefore addressed on the subject and it is hoped that steps will shortly be taken to carry out necessary repairs. This temple, though rather dilapidated, is of particular interest (Plate LXXVIII, *a-d*). It has two simple *śikharas* of a sober design, one of which contains a shrine dedicated to Śiva; the basement is decorated with a series of figures full of movement and grace, some of the *mithuna* type, others playing musical instruments; and the entrance to the sanctum (fig. *d*) is a fine square doorway with a well-balanced design of figures and floral ornament.

The Dolmen at Pipalgaon.

A new *ṭilota*, or dolmen was discovered at Pipalgaon, in the Bhandara District, by the Coin Expert attached to the Nagpur Museum, and inspected by the Superintendent of this Circle in 1933-34. It is a 'chamber' of roughly square plan; five megaliths supporting an even larger boulder which serves for a roof. It is in every respect identical with European dolmens (Plate LXXVII, *a*). Steps are being taken to declare it a Protected Monument.

Stone Age Cemetery (?) in the Drug District.

Near Sorar, Chirchuri, Kabrahat, Majagahan and Karhibhandar, all in the Drug District, there are large areas of what can tentatively be called a Stone Age Cemetery, though neither the age nor the purpose of these remnants are known. These areas are covered with a large quantity of stones, evidently heaped up by man, and here and there a huge megalith standing erect as if to mark a grave (?) (Plate LXXVII, *b*, *c* and *d*). No excavations have so far been carried out under the boulders. All the five villages are situated within a circuit of about 5 to 6 miles. Local people know no stories or legends connected with these monuments. There is no writing, carving or engraving on any of the upright stones. They have been declared Protected Monuments and further investigation is indicated.

EXCAVATIONS AT THEH POLAR, DISTRICT KARNAL.

By Mr H. L. Srivastava.

During the cold weather of the year 1933-34 the then Director General of Archæology decided to carry out a tentative exploration of the mounds at Theh Polar, District Karnal, the existence of which was brought to his knowledge while excavating ancient remains at Kurukshetra in 1921-22.[1] The work lasted for about a month and a half. The choice of the site and its partial excavation were amply justified by the yield of about 465 antiquities, consisting of coins, clay seals, beads, pottery and copper vessels and other minor finds.

The ruins lie on the southern bank of the Sarasvati river and there is a tradition that they mark the site of some ancient village destroyed before the *Mahābhārata* wars.[2] Tradition also describes the place as an abode of Paulastya *muni* who was the ancestor of Rāvaṇa.[3] It falls within the circuit of the Holy Land of Kuruskhetra, "the Field of the Kuru", whose history has been described in detail in General CUNNINGHAM's *Archæological Survey Reports*, Vols. II and XIV and also in his *Ancient Geography of India.*

Two mounds, namely B and C, measuring 480′×635′×15½′ and 779′×690′×10′ respectively, were selected for excavation. Three trenches with an average width of 50′ were sunk in B, while C was completely excavated (Plate LXXIX). The latter brought to light the remains of a large quadrangle with bastions in the four corners and a few rooms along the enclosure wall (Plate LXXX, *b*). The interior of the rooms and the courtyard were excavated down to the floor level. Except for a few detached structures, the court presents a wide, open space, and no antiquities were found in the centre of it. Entrance to the building was provided from the south and east sides. The enclosure wall is uniformly 3′ wide and stands to a height of 2½′ in the south to 5′ in the north. Rooms 1, 16 and 17 have brick pavements, drain and *chūlhā* respectively, while all the others have no special features worth mentioning. Towards the east of R. 53 there is a rectangular brick-lined pavement which appears to have been used as a common bathing place. A trench 240′ long and 70′ wide was sunk in the courtyard and revealed structures of the second stratum at a depth 7½′ below the surface of the mound (Plate LXXX, *c*), but no plan can be formed as the diggings had to be closed in view of the harvesting season. Pottery objects consisting of bowls, cups, jugs with spout, *hāṅḍī*, incense burner, *etc.*, all belonging to the Muhammadan period, were recovered down to this level (Plate LXXXI). Among the copper objects mention may be made of a cup (C. 194, Plate LXXXII, *a*), spoon (C. 403, Plate LXXXII, *d*), fragment of a bellowing pipe (C. 368, Plate LXXXII, *b*), ear-ring commonly called *jhumkā* (C. 83, Plate LXXXII, *e*) and a silver tooth-pick (C. 410). Besides the above were found copper coins belonging to the Sultans of Delhi, *viz.*, Shamsu-d-dīn Altutmish (A.D. 1210-1235), Jalālu-d-dīn Fīroz II (A.D. 1290-1295) and 'Alāu-d-dīn Muḥammad Shāh II (A.D. 1295-1315).

[1] *A. S. R.*, 1921-22, pp. 46-49.

[2] *Karnal District Gazetteer.*

[3] As will be seen from the present repoit, the local tradition is not reliable. The site was still occupied only a few hundred years ago, and many finds date back to the 3rd-4th century A.D.: long after the battle of the *Mahābhārata* coul have taken place.--*Editor.*

One copper quarter-anna belonging to Sikandar Begam of Bhopal (1847-1868 A.D.) was also discovered on the surface of the mound towards the south overlooking the Sarasvati river.

Towards the south-east of the trench and close to the enclosure wall a pit measuring 32′×20′×3′ was dug up and revealed structures of the 3rd stratum (Plate LXXX, *d*). Here a hoard of 232 copper coins (C. 411) was discovered buried in a pot. This hoard consists of a large variety of "warrior type" or Yaudheya coins which have been assigned to the 4th century A.D., showing a male figure on the obverse standing to the front, holding a spear in his right hand, his left resting on his hip; below a standing cock; and on the reverse, a robed male figure walking left with the right hand extended and the left hand placed on his hip.[1] Along with them were also found coins of Vāsudeva, Kushāna king of Northern India (3rd century A.D.), which, being ruder in execution, may have been imitations of his coinage adopted by the chiefs ruling in the Panjab during the 3rd and 4th century A.D. The coins with illegible legends show the Kushāna type of king at an altar on the obverse; and either Śiva and Bull, or the seated goddess Ardochsho on the reverse.

The Yaudheyas were the inhabitants of the North-west Panjab, but in course of time they greatly extended their territory towards the east and the south. Their coins were found "all over the country as far as Delhi and Ludhiana". They belonged to a warrior tribe, at first mentioned by PĀṆINI[2], then in the Junagarh inscription of *Mahākshatrapa* Rudradāman who boasts of having "rooted out the Yaudheyas" (150 A.D.);[3] and later in the Allahabad Pillar Inscription of Samudragupta (330 A.D.) where they occur after the Mālvas and Ārjunayanas and before the Madras and Ābhīras.[4] Apart from the two copper seals we also recovered very interesting clay seals and sealings. They were found at varying depths in different parts of the site, though no seal was discovered in any of the trenches in mound B. From the description of clay seals found at Sunet, District Ludhiana, it appears that the Theh Polar seals bear resemblance to them in technique, emblems and language, which is Prakrit or mixed Sanskrit. Dr HOERNLE exhibited the Sunet seals before the Royal Asiatic Society of Bengal in 1884 and assigned them to the Yaudheyas,[5] and from the provenance of their coins at Theh Polar it seems that these seals also belong to the same period.

The emblems on the seals appear to be Brāhmaṇical. It may be said that the occurrence of the symbol of human feet, the *charaṇa-pādukā*, may mean a *Buddhapada* or the *pādukas* of the Jain *tīrthaṅkaras*; but it may as well be taken as a *Vishṇupada*. The trident or *triśūla* emblem is Brāhmanical, and the same remark applies to symbols like the *chakra*, the lotus and the bull. The fire-altar emblem is of Persian origin and is a characteristic of the Sāsānian coinage adopted on the Scytho-Sāsānian coins dating from 300 to 450 A.D.[6] Although the use of the fire-altar on the coins became more prevalent after the invasion of the

[1] SMITH's *Catalogue of Coins*, Vol. I, Plate XXI.
[2] Prof. BHANDARKAR :—*Indian Antiquary*, Vol. I, p. 23.
[3] *Journal of the Bombay Asiatic Society*, Vol. VII, p. 120.
[4] *Bengal Asiatic Society Journal*, Vol. VI. Allahabad Pillar Inscription, l. 19.
[5] *Proceedings of the Asiatic Society of Bengal*, 1884.
[6] CUNNINGHAM's *Numismatic Chronicle*, 1893, p. 169.

Hūnas,[1] yet the influence of the coinage is visible on these clay seals. The fire-altar type of seals was also found at Bhita and Basarh.[2]

In the matter of the use of seals and sealings readers are referred to the studies by Dr FLEET[3] and Sir John MARSHALL.[4]

Some of the seals at Theh Polar bear their inscriptions *in relievo* while others have their devices sunk into the clay. Out of the two copper seals, one (C. 252) (Plate LXXXII, *i*) with the *triśūla* emblem in the margin has an inscription 'reversed and counter-sunk' which reads *sam-mukkh*(*e*) *Kāś*(*ī*)*śvarasya*, *i.e.*, 'in the presence of the Lord of Kāśī'; while the letters on the other are defaced. They were found in rooms 20 and 53 respectively at a depth 9′ below surface. Both of them appear to have been used for marking letters and documents. Another clay seal of the *Kāśīśvara* (C. 386) (Plate LXXXII, *g*), with trident on the top and knob at the back, apparently meant for the same purpose, was found in room 51 about 8′ b.s. Almost all the clay seals are indistinct and illegible. Mention may be made of two, one with the 'fire-altar' symbol and the inscription *Śrī Rājama*(*ha*)*ta* (C. 152) and another with only the last letters of a name °*bhadrasya* (Plate LXXXII, *k*). Besides the above, seals bearing emblems of a bull (Plate LXXXII, *h*), trident (Plate LXXXII, *l*), *charaṇapādukas* and lotus, *etc.*, were also discovered.

Three trenches were sunk in mound B which brought to light structures built of large-sized bricks (14″×8″×3″) with finger impressions, laid on mud; the walls standing to a height from 2′ to 3′ only. After a uniform digging of 6′ below, three pits measuring 35′×27′, 19′×20′ and 24′×20′ were sunk inside the trenches, but no remains of structures were found (Plate LXXX, *e* and *f*). Pottery vessels, beads, copper utensils and coins were found in large numbers. Among the copper objects, mention may be made of a dish (diam. 11·5″), cup (diam. 6·3″) (Plate LXXXII, *e*), and bangles plain and of a beaded design (Plate LXXXII, *f*). 542 copper coins (B.A. 262) belonging to Ghiyāsu-d-dīn Balban (1265-1287 A.D.) were discovered buried in a pot in room 4 at a depth 6½′ b.s. Another hoard of 188 copper coins and 1 silver, belonging again to Ghiyāsu-d-dīn Balban and Nasiru-d-dīn Maḥmūd (1246-1263 A.D.) respectively was also unearthed in the same room 4 and at the same depth. Other coins which were discovered belonged to Fīroz Shāh Tughlaq (1351-1388 A.D.), Jalālu-d-dīn Fīroz II (1290-1295 A.D.) and Shamsu-d-dīn Altutmish (1210-1235 A.D.). It was only in trench A at a depth below 8½′, that two defaced copper coins (B.A. 438) bearing the figures of a Kushāna type of king at an altar were discovered.

There was no time to attack the third mound, *i.e.*, Mound A; but the entire site appears to be very interesting, and with the progress of the excavations in future there is every likelihood of uncovering the site of a village or town which enjoyed the prolonged occupation of many generations.[5]

[1] RAPSON's *Indian Coins*, pp. 105, 122.

[2] *A. S. R.*, 1911-12, Pl. XXI, fig. 104.

[3] *Imperial Gazetteer of India*, Vol. II, pp. 1-88.

[4] *A. S. R.*, 1911-12, pp. 44-47.

[5] Particular importance attaches to any 'civil' site in India, where almost all sites are religious buildings; hardly any villages or towns (Taxila and Mohenjo-daro, of course, not forgotten) of the early and the mediæval period have come to light.—*Editor.*

EXCAVATIONS IN THE LAHORE FORT.

By Mr J. F. Blakiston.

Work during 1930-31.

Excavations in the Lahore Fort to the north and south of the old *ḥammāms* (baths) have revealed at the former the foundations of a series of buildings besides eight small ornamental tanks surrounded by pathways of brick-on-edge in a geometric design (Plate LXXXIII, *c*). The buildings—or rather compartments —form three sides of a court, the *ḥammāms* being on the fourth. At the back of those on the north is another row of compartments forming the southern side of another court, on the east and west sides of which buildings still exist; the northern side being the fort wall. From the court on the southern side of the *ḥammāms*, where several modern buildings had to be demolished (Plate LXXXIII, *a* and *b*), earth and *débris* to the depth of some four feet was removed to reach the original level of the ground. Beyond finding two flights of steps leading to the paved higher level on the east and a few old brick drains, nothing of value was discovered in this court, from which the little marble mosque is entered. But when a pathway has been provided around it and its centre has been grassed this part of the Fort will be of no small interest.

The *Maktab Khana* courtyard has also been cleared down to some 2′ 6″ in depth, and here the old brick-on-edge paving has come to light. Excavations have just been commenced to the west of this court where there is nothing at present to report.

On the *east of the Fort, beyond Jahāngīr's Court,* a complex of walls of varying dates has been exposed (Plate LXXXIII, *d*). It is difficult to decide, at the present stage of excavations, what relationship these walls have with the buildings still extant in their neighbourhood. With the march of excavation the disposal of surplus earth has caused no little trouble and arrangements have had to be made for the removal by ponies and donkeys of 300,000 cubic feet of *débris* outside the Fort.

Excavation during 1931-32.

With the grant for excavations reduced to only Rs. 4,000 it was possible to execute only a small amount of work. A useful improvement was undertaken along the *northern and western walls of the main buildings* at the 'moat' level, where earth, which had been heaped up against them, was removed from the plinths and spread over the area in front (Plate LXXXV, *a*).

A *small building* at the *south-west corner of Jahāngīr's courtyard,* which had been used during the occupation of the Fort by British troops as a bakery, was cleared, and a modern concrete floor removed from it. Here a small tank fed originally by a channel leading from a fish-scale waterfall was brought to light. A few men were also employed in continuing the excavations to the *west of the Maktab Khana,* and what can be best described as the *Mosque courtyard,* commenced last year (Plate LXXXIV), but little or nothing of outstanding interest was found.

Work during 1932-33 and 1933-34.

During the last two years under report the grant for exploration and excavation has been diminished from the original Rs. 14,000 (1930-31) to Rs. 1,000 (1932-33) and to Rs. 363 (1933-34). With such a small amount in hand nothing worth mentioning could be done. A little digging *west of the ḥammāms* brought to light some remains of old walls and pavements. *North-west of the Moti Masjid* a trench was dug measuring 50'×15'; though small, this was enough to confirm the suggestion that a parallel brick pathway running N.—S. would be found here, forming the fourth side of the court.

EXCAVATIONS AT THE BIJAI MANDAL, DELHI.

By Mr H. L. Srivastava.

Operations during the year 1930-31.

Excavations at the Bijai Mandal (*recto*: Vijaya-maṇḍala) near Delhi, conducted during the year 1930-31 by the Conservation Assistant, Mr Mata Prashad VARMA, brought to light the remains of a large pillared hall which can be identified with more or less certainty with the renowned *Qaṣr-i Hazār Sutūn, i.e.*, 'The Palace of the Thousand Pillars', built by Muḥammad Tughlaq about the year 1325 A.D. There seems to exist some difficulty however in this identification in view of the fact that another palace was also known by this name: that must have been at Siri where Ghiyāsu-d-Dīn Tughlaq, after his victory in 1321 A.D. over Khusrau Khān, shed tears over the unhappy fate of Quṭbu-d-Dīn and the other sons of 'Alāu-d-Dīn, his patron.[1]

Literary evidence about the Thousand Pillared Palace of Muḥammad Tughlaq is found in the works of Ẓīāu-d-Dīn BĀRŪĪ and of Ibn BATŪTA. The pillars were made of varnished wood supporting a wooden roof, exquisitely painted: the hall was used for public audiences, after prayers and at daybreak, for state functions and special ceremonies during the great religious festivals.[2] It was here that Ibn BATUTA, the famous African traveller, was received by Muḥammad Tughlaq in 1341: he remained at the court of the Sultan up to 1347, and left us a graphic description of the Imperial Palace and the Qasr-i Hazar Sutun. BATUTA states that the interior of the palace was approached by three gates in succession. At the first gate there were guards and trumpeters and flute-players who announced the entrance of notable visitors. A place of execution was outside this gate.[3] The second gate opened on a spacious hall of public audience and between this and the third gate there was a large platform where the principal mace-bearer (*naqību-n-naqabā*) sat. The third gate opened into the celebrated Hall of Thousand Pillars, and at the entrance sat certain clerks (*mutaṣaddīs*) who checked every one who passed through that doorway.[4] When in 727 A.H. (1326-27 A.D.) Muḥammad Tughlaq took offence at his subjects of Delhi and had the town completely

[1] Ẓīāu-d-Dīn BĀRŪĪ:—*Tārīkh-i Fīrūz Shāhī*, Iranian text, (Calcutta edition, 1862), p. 421.
[2] V. A. SMITH:—*Oxford History of India*, p. 245.
[3] *'Ajāību-l-Asfār* (Lahore, 1898), Vol. II, p. 93.
[4] *Travels of Ibn Batuta*, translated by H. A. R. GIBB, p. 198.

evacuated, it was from the top of this Hall that the Sultan "casting his eyes over the city of Delhi in which there was no fire, smoke or light, had said. 'Now my heart is satisfied and my feelings are appeased' ".[1] The palace was probably pillaged by Tīmūr in 1398; for there is literary evidence that all the palaces in Jahanpanah and Siri have been destroyed by the invader.[2]

During the year 1930-31 a large quantity of accumulated *débris* has been removed, and various structures exposed at a depth of 4 to 20 feet. (See Site Plan, Plate LXXXV.) Among the structures unearthed there are *ḥammāms*, drains, cisterns, water reservoirs, *etc.* One of the cisterns is faced with tiles of the same kind as found in the Tomb of Altutmish erected about 90 years before the Palace of the Thousand Pillars; this fact, therefore, is a valuable clue to the chronology of the structures.

To the north of the group of higher structures a large area was cleared, measuring some 290′ by 210′ (see Site Plan), partly covered by a few graves of the time of Sikandar Lodi: here rows of holes for the insertion of (wooden) columns were found (Plate LXXXVII, *c*), and in two of these holes several iron dowels (Plate LXXXVII, *a*) with sharp points. The conclusion, therefore, is justified that there was once at this site a large pillared hall the upper structure and columns of which were of wood; and in view of the considerable size of the area the identification of this hall with the Qasr-i Hazar Sutun is not improbable. The southern end of this hall is bordered by a well-plastered stone wall. (Plate LXXXIV, *c* and *d*.)

A great amount of clearance was done on the east (Plate LXXXVI, *a* and *b*), and the west sides (Plate LXXXVI, *c* and *d*), but this work has not yet been completed during 1930-31.

By reference to the Site Plan it will be seen that in the Central Stone Hall (Plate LXXXVIII, *c* and *d*) situated on the highest level of the site at present there have been discovered *two Treasure Wells*. These are circular structures sunk exactly like wells in the floor of that room; and a large number of minor finds including a hoard of coins have been unearthed from both. These included pieces of ivory, and china; beads of glass; pearls, red coral, gold, ruby and other precious substances; stone balls; clay lamps; and fragments of glazed multicoloured pottery called *G͟horī* or 'Poison' plates. (Plate LXXXVII, *a* and *b*.)

Among the 27 coins found in these Treasure Wells three are of gold, two of silver, three of billon and 19 of copper. They belong to the reigns of 'Alāu-d-Dīn K͟hiljī, Quṭbu-d-Dīn Mubārak S͟hāh, G͟hiyāsu-d-Dīn Tug͟hlaq, Fīrūz S͟hāh Tug͟hlaq and Tug͟hlaq S͟hāh II. As all of these are contemporaneous with the period assigned to the Qasr-i Hazar Sutun, they support the identification with the Thousand Pillared Palace of the pillared hall unearthed this year.

Work during the Season 1931-32.

During the year 1931-32 the area on the top of the mound, to the south of the masonry building, which was covered with an accumulation of earth has been cleared. This brought to light a *kachhā* court and the foundations of a series of

[1] V. A. SMITH:—*Oxford History of India*, p. 239.
[2] ELLIOT and DAWSON:—*History of India*, Vol. III, p. 503.

compartments to its east. By cutting trenches at the ground level, patches of terraced flooring along the wall have been discovered, and these remains suggest that some minor buildings attached to the Qasr-i Hazar Sutun once stood there. (Plate LXXXVIII, *a*.) At the south-east corner a second ramp has been exposed (Plate LXXXVIII, *b*) which gave access to the subsidiary buildings which have since disappeared; but a long drain is still to be seen running east to west. The clearance of the plot at the foot of the huge ramp on the east has disclosed ruined foundations of rooms which seem to have been once used as a guard house. The ruins of a structure, possibly of a *ḥammām*, have also been brought to light. (Plate LXXXVII, *e*.) New steps have been exposed to the south of the domed pavilion (Plate LXXXVII, *d*), but it is yet uncertain whether they continued to lead towards the large steps to the palaces and the waiting hall below. The recent discovery of the east and west walls of the Qasr-i Hazar Sutun leads one to believe that the Palace originally extended to the arcade which now forms part of the *khānaqāh* of Shaikh Ḥasan Ṭāhir. (See Site Plan.) In this connexion it will be necessary to expose the foundations of the earlier walls so that the stone bases of pillars, if any, may be brought to light in the area occupied by the above *khānaqāh*.

Among the finds discovered in the south-east and north-east corners mention may be made of a few pieces of china and black marble together with fragments of sandstone sculptures. Excavations were again done in the north and south treasure wells which yielded a number of important coins last year. Besides a few beads of cornelian, crystal, *etc.*, during this season 36 coins were discovered, out of which 4 were of gold, one of silver, 8 of billon and 23 of copper. These coins together with those exhumed last year have been examined and found to consist of the issues of Quṭbu-d-Dīn Aibak, Muizu-d-Dīn Bahrām Shāh, Ghiyāsu-d-Dīn Balban, Jalālu-d-Dīn Khaljī, 'Alāu-d-Dīn Khaljī, Ghiyāsu-d-Dīn Tughlaq, Muḥammad Shāh Tughlaq, Fīrūz Shāh Tughlaq, Muḥammad bin Fīrūz Shāh Tughlaq, Bahlol Lodi, Sher Shāh and Akbar.

Further Work during 1932-33.

With a very much diminished grant not much could be done during the year 1932-33. A mass of earth banked against the west wall of the Bijai Mandal was removed: and in the course of these operations a *pakkā* concrete landing and a few stone steps giving access to the Palace were discovered. A large mass of *débris*, several feet deep, lying on the concreted court to the east of the Qasr-i Hazar Sutun was also removed this year, and this resulted in the exposure of fragmentary patches of a concrete floor in the courtyard; of the original levels of the drain and ramp at the south-east corner as well as of guard rooms at the north-east end. The spoil earth has been neatly banked up along the east boundary of the site, and the ground has been carefully dressed with a good slope to facilitate the drainage of rainwater outside the excavated area.

The finds discovered during the excavations of this year are of no special interest and mostly comprise fragments of glazed tiles and encaustic bricks, stone balls and pieces of broken china.

Work during the Season of 1933-34.

The north boundary wall of the Qasr-i Hazar Sutun area was further exposed for a short length along its west face. Excavation to the west of the domed entrance revealed several oblong rooms there. Some sixty three coins, which have not yet been deciphered, a few beads and pieces of old glazed pottery were recovered in the excavations.

EXPLORATION AT TAXILA, 1930-34.

By Sir John Marshall.

The work of the four seasons under report at Taxila falls naturally under two heads. On the one hand, there has been the excavation of two Buddhist settlements hitherto untouched by the spade; on the other, the continuation of various tasks begun in previous years, which it was important to finish as far as possible before publishing my final account of the twenty-two years of exploration that I have carried out on this site.[1] Some of the tasks in question were directed to securing complete plans of buildings that had not hitherto been cleared in their entirety; others to deepening the digging at various points and obtaining further knowledge of the age and character of the lower settlements both on the Bhiṛ Mound and in Sirkap. To enter into particulars of these multifarious operations or of the many finds that have been made in the course of them is beyond the scope of this report, and, so far as this part of the work is concerned, I shall confine myself to stating, as briefly as I can, some of the more important conclusions to which these recent researches have led me.

The Four Periods of the Bhiṛ Mound.

First, as to the age of the settlements superimposed one upon another in the Bhiṛ Mound. As I have explained in previous reports, there are four clear and distinct strata on this site. The first consists of a few fragmentary ruins on the surface of the mound; the foundations of the second extend to an average depth of 4 to 6 feet below the surface; those of the third to a depth of 9 or 10 feet, though occasionally deeper; and those of the fourth to a depth of 14 or 15 feet. Virgin soil is reached at a depth of from 16 to 20 feet. Now, *the age of the first and second strata* is definitely fixed by coins, gems, pottery and other antiquities: it coincides with the Mauryan period and lasts until the destruction of the city at the hands of the Bactrian Greeks about 170 B.C. In regard to *the age of the third settlement*, we are also on relatively safe ground, since there is no question that it immediately preceded the second, though how far back it extended we have not the requisite data for determining—possibly as far as the flourishing days of Achæmenid rule. *The age of the fourth settlement* is more problematical. Its masonry is of the rubble variety, like that of the older strata, but

[1]An exhaustive monograph on Taxila from the pen of Sir John MARSHALL will be published shortly by this Department.—*Editor.*

conspicuously rougher and more primitive-looking, as if the site had lain deserted for a considerable period between the destruction of the fourth city and the re-building of the third. Overmuch stress, however, must not be laid on this difference in the character of the masonry; for it may be that neater methods of building resulted from contact with Persia after the Achæmenid conquest of the Panjāb, or there may have been other reasons for the sudden improvement which are not now apparent. Moreover, the presence of soakwells in the houses of the fourth stratum similar to those found in the upper strata, coupled with the use of similar makeshift pillars for supporting the roofs and with the character of the minor antiquities—such as they are—which have been found in the fourth stratum, all go to show that no great length of time could have elapsed between the two settlements. Probably, therefore, we shall not be far out, if we ascribe the fourth city to the 6th or 7th century B.C. One thing is quite sure; *viz.*, that the culture revealed here has only a very remote connexion with the prehistoric culture of the Indus—no more, in fact, than can be traced in survivals of a religious and artistic character which persist on into Mauryan and later times.

Foreign Influences at Taxila.

Secondly, as to foreign influence at Taxila. We know that, under the Achæmenids, the kingdom of Taxila formed part of the great Persian Empire, and in an Aramaic inscription which I found in Sirkap we possess tangible proof of this connexion with Persia. But in spite of this connexion, Achæmenid Persia seems to have had little effect on the economic and material culture of Taxila. Only one Persian coin—a siglos of Darius—has been found here, and that in a hoard of the Mauryan age, which also comprises coins of Alexander the Great and Philip Aridæus. Of Persian sculpture or of Persian influence in terra-cotta or metal work or pottery or anything else, except perhaps a few engraved gems, there is not a trace. Any idea, therefore, that the Persian motives observable in the art of Gandhāra and the early Indian School is traceable to the Achæmenid domination of the Panjāb, may now safely be discarded. Seemingly, these elements must have found their way to India with the stream of Perso-Hellenistic art which first set in under the Mauryas and gathered much greater volume during the Parthian period.

Of Hellenistic influence during the Mauryan period—that is, before the conquest of the Panjāb by the Bactrian Greeks—some slight evidence is found on the Bhiṛ Mound site in occasional specimens of Greek pottery, terra-cotta figurines, coins and gems. Such objects, however, are very few and far between. During this period (4th and 3rd century B.C.) the arts and crafts of Taxila drew their inspiration far more from Hindustān than from the Seleucid Empire. So marked, indeed, is this inspiration from the South-East that for the time being the products of local art acquired the same peculiar refinement and decorative charm that invariably distinguishes Mauryan antiquities. This phase, however, lasts only until the downfall of the Mauryan Empire. With the entry of the Bactrian Greeks on the scene, the influence of Hindustān disappears and is replaced to some extent—but only to a very limited extent—by Greek. The new conquerors

probably had little enough time to spare for the arts of peace. They built a new city at Taxila and laid it out on a far more regular plan, but there is nothing typically Greek about their buildings, nor are there any remains of temples, altars, public monuments or statues such as the Greek fancy ordinarily delighted in. Where the Greek spirit manifests itself most prominently is in the coinage; but it is seen also in some of the other minor arts such as gem-engraving, terracotta work and pottery; and it may be noticed parenthetically that it was in all likelihood to such small objects as these, which found their way into the distant markets of Central India and Hindustān, that the Hellenistic influence noticeable in the reliefs of the early Indian School was mainly due.

Under the rule of the Śakas, who succeeded the Greeks in the first quarter of the 1st century B.C., the influence of Hellenism grew weaker and weaker, and such art as there was degenerated into a crude local imitation of Greek forms. Then came the extension of Parthian power to India, and with it an entirely new impetus was given to Hellenism—the most powerful influence, indeed, that it had yet received. It is neither to the Bactrian Greeks nor yet to the Śakas, but to the Indo-Parthian rulers, that we owe most of the Greek influence which characterizes the art of the N.-W. during the early centuries of the Christian era. The Parthians were not the half-barbaric people that Roman and modern historians have usually depicted. They were the heirs of two great streams of culture; on the one hand, to the age-old Īrānian culture of Persia, on the other, to the Hellenistic culture of the Seleucid Empire; and they attached more importance to the latter, not only because it was common to the greater part of their own Empire, but because it represented the culture of the whole Western World. Add to this that the Parthians drew large revenues from the carrying trade between the Mediterranean on the one hand and Afghānistān and Northern India on the other,—and we can understand why the bulk of the monuments and antiquities in the Parthian city of Sirkap are more Hellenistic than Indian in character, and why exactly the same patterns and workmanship are found at Taxila and at places as far removed from it as Herculaneum and Pompeii.

Importance of Parthian Influx.

So far as the art of Taxila itself is concerned, we can now safely say that for the first three or four centuries after Christ it owed its character to this influx of western ideas for which the Parthians were responsible. Of the beginnings of the Gandhāra School we cannot speak with such complete assurance because that school took shape not at Taxila itself, but somewhere beyond the N.-W. Frontier—probably in the region of Swāt—where the sculptors could obtain the phyllite and other schist stones which they used for their work. The evidence, however, available at Taxila points clearly to the conclusion that the inception of this school also took place during the rule of the Parthians in the North-West, and was mainly due to their Hellenizing tendencies.

The 'Indo-Afghān' School of Art.

About 400 A.D., or a little later, there arose a new school which gave a fresh lease of life to the dying elements of classicism. This school was equally active

in the Panjāb and in Afghānistān and may rightly, therefore, be designated the Indo-Afghān.[1] The important place which it occupied in the history of Indian and Central Asian art and the wide-reaching influence which it exerted during the Early Mediæval Age, have now for the first time been made apparent by my discoveries at Taxila and by those of the French Mission in Afghānistān. Works of this school have, it is true, long been known to archæologists, but for lack of adequate data the school has been confused with the older school of Gandhāra and no distinction made between their styles. We can see now by what a wide gulf the two schools are separated. What they share in common, is their heritage of classical elements and a variety of religious types and formulæ which had been largely invented by the earlier school and had become the universal stock-in-trade of the Buddhist iconographer. For the rest, they are as different in spirit and technique as they are in age and in the materials which they employ. Whereas the artists of Gandhāra had tended always to be formal, academic and stilted, their Indo-Afghān successors, when unconstrained by the trammels of religious tradition, broke out into a free and realistic mode of expression which places their work among the most vital and vigorous products of Indian art.

The above, let me repeat, is nothing more than a brief summary of the more important conclusions to which recent operations at Taxila have led. With the multifarious data upon which they are based it is manifestly impossible to deal here, and they will have to be reserved for my forthcoming monograph on Taxila. Apart, however, from these operations carried out mainly in the ancient cities and spread over many parts of the site, the campaign of the four years under report has, as I have already indicated, included the excavation of two important Buddhist settlements, Bhamāla and Kālawān, and as this part of my work is more or less complete in itself, I shall describe it in greater detail.

The Bhamāla Monastery.

From a defensive point of view the position of the Bhamāla monastery was an ideal one; for not only was it situated at the very head of the Haro Valley and at the foot of the Murree Hills, ten miles or more to the east of Sirsukh, but it was protected on three sides of the river Haro itself, which here sweeps in a sharp bend round its base, and on the fourth side by the hills (Plate LXXXIX, *a*), so that the monks could readily defend their home against small bands of raiders, or make their escape, in the event of the city itself being invested by larger forces. The only real objection to the position would be its great distance from the city, which would make it virtually impossible for the *bhikshus* to do any daily begging in the streets; and in former days, when such begging was the rule, this objection would have been insuperable; but the Bhamāla monastery was not founded until the 4th or 5th century A.D., when the condition of monastic life in the North-West had radically changed and the *bhikshus* were residing in well-built and evidently well-provisioned monasteries, where mendicancy—except may be for form's sake—was no longer necessary.

[1] At my suggestion this name is now being adopted by the French excavators in Afghānistān.

The terrace—a natural one—on which the monastery stands, measures some 400′ from east to west by 140′ from north to south. In the middle rises the solid mass of the principal *stūpa*, set round with a group of small *stūpas* and chapels, and to the east of it a rectangular monastery of a type now sufficiently familiar at Taxila (Plate XC, *d*). To the west of the *stūpa* group were other ruins, doubtless belonging to a second series of monastic buildings, but on this side the terrace has been much eroded by the river floods, and what is left of these structures would hardly be likely to justify the expense of excavation.

In its present ruined condition the principal *stūpa* still has an elevation of over 30 feet (Plate LXXXIX, *b*). Its plan is cruciform, consisting of a tall square podium with an imposing flight of steps ascending the middle of each side; and to increase its dignity the more, the whole is set on a plinth some 3′ in height, which in its outline follows the salient and re-entrant angles of the podium. The core of the structure is composed of heavy blocks of limestone laid in regular courses according to the manner common in the 4th and 5th centuries A.D., with small pebbles and mud filling the interstices between them. The facing is of semi-ashlar masonry of a characteristically late type, similar to that of the monastery described below but less massive. Mouldings and pilasters are as usual of *kañjūr* stone, which thanks to its softness can be more easily chiselled than the refractory limestone, and over the whole there is spread a thick facing of lime plaster in which all the finer details of decoration, both architectural and figural were made out. On the face of the projecting plinth this decoration takes the form of a series of panels, divided one from another by stunted Corinthian pilasters of a coarse and clumsy type. Some of the panels were bare, others were relieved by single figures of the Buddha in the *dhyāna* or *śikshā mudrās*; others (and these were at the salient angles) by a group of three Buddhas or of the *mahāparinirvāṇa* scene (Plate LXXXIX, *d*). The podium, which unfortunately is much mutilated, rose to a height of 9′ 6″ above the plinth and was relieved on all sides by slender Corinthian pilasters set on a boldly moulded base, at the foot of which, and resting on the top of the projecting plinth, were a series of small stucco figures of the Buddha in the same attitude as those on the plinth below. Above the podium was the usual circular drum and umbrellas which invariably crowned these monuments. That the drum was also embellished with figural sculpture was proved by the finding of a draped figure belonging to a stucco relief in the *débris* and ashes on the top of the podium. Other fragments also found in the *débris* round about the podium included some brackets of *kañjūr* stone in the form of lions' heads (which had probably fallen from the corners of the podium itself) together with pieces of the crowning umbrellas.

The one really striking feature of this monument is the boldness of the four fine flights of steps round its base, which are all the more interesting because they exhibit better than any other examples at Taxila the design of the raking cornice, the brackets of which are carried down in an awkward and far from pleasing manner. At the foot of these cornices, *i.e.*, at the bottom of the lower flight of steps, were pairs of small animals guarding the approaches—lions on the east and west, elephants on the north and south. On the landing above them the cornices

terminated in low pylons adorned at the base with seated Buddhas alternating with Corinthian pilasters.

As to the figural sculptures, there are many detached heads which resemble in style the majority of those found at Jauliāñ and Mohrā-Morādu, but the only piece that merits particular notice is the relief of the dying Buddha already alluded to (Plate LXXXIX, *d*), which adorned one of the panels round the plinth, its precise position being on the east face of the projecting angles in the corner to the east of the southern flight of steps. This panel has a special interest, because it is the only stucco relief from the North-West which depicts the Buddha's death-scene. In length, it measures 2′ 4″; in height, 1′ 6″. Between the two Corinthian pilasters the Buddha is lying at full length on his right side. Behind him are four mourning figures, of whom the one near his feet seems to be a woman. Below, on the face of the plinth, are four other small figures, of which the one near the Buddha's head is a Dhyāni Buddha and the one near his feet a devotee kneeling with folded hands. The two central figures appear to have swooned at the sight of their dying master.

In the 4th and 5th centuries it was usual to construct the relic chamber of large *stūpas* high up in their dome instead of beneath in their foundations, and there is no reason to suppose that the Bhamāla *stūpa* was an exception to this rule. Accordingly there was no likelihood of our finding any relics in the actual *stūpa*; nevertheless a shaft was sunk in the middle of its core (which had already been deeply trenched by treasure-seekers) in the hope that it might possibly contain some deposit of coin such as was known to have been found at Manikyāla. This hope was not disappointed. At foundation level my assistant, Khan Sahib A. D. Siddiqi, who was in charge of the work, came upon two coins at a depth of 11′ 5″ below the surface and of another deposit of 105 coins at a depth of 14′ 6″, both of which have obviously been buried in the *stūpa* at the time when it was built. Two of these coins are Indo-Sāsānian issues but their attribution is uncertain. The two first found have an indistinct head of a king on the obverse and what appears to be a fire-altar on the reverse, somewhat resembling the type illustrated in the *Indian Mus. Cat.*, Plate XXIV, No. 5. The 105 coins in the lower deposit exhibit a crude human figure on the obverse, and a square within dots on the reverse, resembling the specimen from the Lalchak *stūpa* figured in *A. S. R.*, 1915-16, p. 35, No. 34. In the present state of our knowledge the date of these coins cannot be fixed with certainty, but there can be no doubt that they are assignable to the late 4th or early 5th century A.D.

The courtyard in which this *stūpa* stood, being at a higher level by some 7′ than the monastery on the east, was approached on that side by a wide flight of nine steps leading up to a gateway (B 4).[1] The latter is a simple rectangular chamber with portals on its eastern and western sides, which later on were reduced in width by additions to their jambs. On either side of the western portal is a small plinth which once supported a statue, probably of a Dvārapāla, but, unfortunately, nothing is now left of these two statues except the feet. As these are 17″ in length, we may assume that the statues stood between 9 and 10 feet high.

[1] These symbols are references to the site plan in Plate XC, *d*.—*Editor.*

On the outside of this gateway, abutting against its side walls, are two small image shrines (B 3 and B 5) with plaster floors, but all trace of the images themselves has disappeared. Further out on the right and left of the gateway are three larger chapels, two facing each other (B 1 and B 7), the third (B 8) facing westwards towards the Main Stūpa. Round about the rest of the Court are some nineteen small *stūpas* with square bases, such as are found in all the more important *stūpa* groups at Taxila. The chapels take the form of single chambers with small porticoes in front of their entrances; probably all three were embellished with figural reliefs standing on low plinths against their inner walls, though actual remains of these figures have been preserved only in two of them, *viz.*, against the east wall in B 7 and against the south, east and north walls in B 8. Inside the latter chapel there are also remains of an unusual type of *stūpa* (A 20), the base of which is relieved be twelve concave fluttings with bracket projections at the corners.

The rest of the minor *stūpas* are typical structures of the 4th or 5th century A.D., many of them being similar in design to those at the Dharmarājikā, where their later date was determinable by the presence of coins of Shāpur II (A.D. 309-380). Their bases are square and constructed of semi-ashlar or occasionally ashlar limestone masonry with *kañjūr* facings. Round the base there generally runs a row of stunted Corinthian pilasters with the usual Buddha figures in between. In Stūpa A 5 was found a small earthen pot (*ghaṛā*) containing the following articles: 2 beads (1 of shell and 1 of black agate); a piece of a carnelian finger-ring; 2 pieces of coral; 6 fragmentary copper coins of the same type as those found in the lower deposit of the Main Stūpa; and 1 fine silver Sāsānian coin, the attribution of which is not yet certain, but which is probably referable to Varahrān IV (386-397 A.D.). On the obverse is the bearded bust of the king to right, in beaded border; his crown is surmounted by crescent and globe with wings behind. The marginal legend has not been deciphered. On the reverse is a fire-altar with (?) head of Ormazd in flame; on each side attendant with spear "presenting arms". The marginal legend has not yet been deciphered.

In Stūpa A 15 was found another crushed jar containing 7 pieces of bone; 3 beads, of blue glass, agate, and coral respectively; a gold ear ornament set with 3 pearls (diameter $\frac{3}{16}$"); and 160 small copper coins similar to those found in the lower deposit in the Main Stūpa. Accordingly it may be inferred that this small *stūpa* was erected at no great length of time after the Main Stūpa itself.

To the west of Stūpa A 8, and doubtless emanating from one or other of the ruined structures nearby, was found a small cylindrical casket of copper (·87" long) containing a similar one of silver (·5" long), which in turn contained a still smaller one of gold, with a tiny rosette of thin sheet-gold and 2 coral beads.

The pavement of the Stūpa Court was composed for the most part of terracotta tiles measuring 1′ 4″ by 9″ by 1·75″, which were covered—probably at a later date—with a coating of lime plaster. Ordinarily, the tiles are laid flat, but in order the better to retain them in position they were divided into squares with lines of tiles-on-edge between. In front of the eastern ascent to the Main Stūpa this tiled pavement assumes the form of a "Wheel of the Law" (*dharmachakra*),

the spokes and rim of which, together with a small concentric circle inside, are formed of tiles-on-edge, the remainder of wedge-shaped bricks laid flat (Plate LXXXIX, *c*, in foreground).

Another interesting patch of tiled pavement occurs in front of the image cell (B 5) which abuts against the north side of the entrance gateway. Here the tiles, which number over 100, are of three sizes, *viz.*, 10·25″ square, 7·5″ square, and 6·25″ square, with a variety of patterns incised on their faces, among which may be noticed svastikas, lotus rosettes, concentric circles, quatrefoils of pipal leaves, crosses, spirals, double-axes, *etc.*, most, if not all, of which had a definite religious significance for the Buddhists.

The monastery to the east (Plate LXXXIX, *c*) is designed on the usual plan with a large Court of Cells in front, and an Assembly Hall, kitchen and refectory in the rear. There are two exceptional features, however, to be noticed in connexion with its plan. One is that the verandah along the western side of the Court of Cells is much broader than usual, and that on this side, moreover, there are two extra cells in the two corners of the verandah, such as are not found in other monasteries, taking up nearly all the verandah space at these points and leaving a passage-way of not more than 2′ or 3′. The other exceptional feature is that the stairs, which give access to the upper floor were located in the kitchen instead of in one of the cells, much to the inconvenience of the monks living above, who would have to cross over the Court of Cells and pass through the kitchen in order to reach their chambers.

The masonry of which this monastery is built is of the late semi-ashlar variety, frequently with two ashlar courses between diaper ones and with small flat stones inserted between the squared ashlar in order to level up the beds. Though very solid, it is not as massive or as finely finished as the masonry of the Kunāla monastery or of the contemporary monastery at the Dharmarājikā. As usual, the interior walls were covered with clay plaster, much of which was converted to terra-cotta in the general conflagration which destroyed this group of buildings. In places the cells are standing up to a height of 10′ or 12′, and in one of the cells (No. 6-7) the doorway, including the stonework over the lintel, is extremely well preserved, though the lintel itself which was of wood has naturally perished. The height of this doorway was 6′ 1″, its width at the bottom 4′ but at the top 9″ less, since the jambs as usual sloped inwards.[1] Inside the cells several of the wall niches are still preserved, but the windows, which for safety's sake were invariably placed up near the roof, have one and all disappeared. Outside the north wall are two massive supporting buttresses, one of which—in the middle of the north side—is more than ordinarily massive and was probably carried up to the top of the second floor some 24′ above the ground. As these buttresses are built of precisely the same kind of masonry as the main body of the structure, it may be inferred that they were added at no great length of time after its erection.

[1] The purpose of the sloping jambs in this and other monasteries was no doubt to make the doors, which were provided with pivot hinges, close automatically.

From the vast amount of burnt earth lying in the cells and courtyard of this monastery, it is evident that the fire which destroyed it must have been a particularly fierce one. Most of the burnt clay doubtless came from the roof, which it had served to protect from rain and heat, but it is noteworthy that in the open courtyard—not in the cells—there was a layer of earth 1 or 2 feet in thickness *underneath* the layer of charcoal and burnt clay, and that this layer of earth was only slightly affected by the fire. It seems, therefore, that when the monastery was in occupation, its stone-flagged courtyard must have been covered with a deep layer of earth—perhaps to prevent the radiation of heat off the stones and so ensure greater coolness. So far as the monastery was concerned, there was quite enough timber in its pillars, floors, and roofs to account for the fierceness of the flames, and there would be no need for the White Huns who destroyed it to add more fuel. Round about the *stūpa*, however, where the fire seems to have been just as fierce, it is clear that the Huns must have piled up large quantities of timber stripped, no doubt, from the neighbouring monastery.

Besides the deposits of coins and other small objects obtained from the *stūpas*, some 30 pieces of stucco sculpture, chiefly detached heads of statues, were recovered from the Stūpa Court, and a number of coins and a few other antiquities from the monastery area. The coins comprised 5 copper pieces of Vāsudeva,[1] 1 copper piece of the later Kushānas, 1 silver piece of Bacharana,[2] 1 copper Indo-Sāsānian piece of the same type as those found in the Main Stūpa, and 21 silver pieces of the White Huns. The last mentioned are specially important, since, being current at the time when the monasteries were destroyed, they help us to determine the date of that catastrophe. Coins of the same class were also found amid the ruins of the Lalchak and the Dharmarājikā monasteries which were burnt at the same time as the Bhamāla, and are figured in my *Annual Report* for 1915-16, Plate XXVI, Nos. 46-50. On the obverse they bear the beardless head of a king to right in beaded border; on the reverse a fire-altar with attendants on either side, but there are several varieties. In one the legend on the reverse is in Pehlevi or Īrāno-Scythic characters, and a prominent feature is a fly-whisk in front of the king's face; in others, the legend is in Brāhmī characters reading 'Shahi Jarava' or 'Jubula' or 'Jabula', and there is usually a short mace in front of the face, but in one specimen (B. L. 333-20) this is replaced by an indistinct monogram. On the reverse there is, in some, a face appearing among the altar flames; in others the face is absent. In some specimens, again, the attendants appear to be presenting spears to the altar, in others to be presenting swords. Who the King Jabula or Jarava was, is uncertain. In type and style his coins are akin to those of Napkī, King of Kābul, and are evidently earlier than the issues of Toramāṇa. SUNG-YUN, the Chinese pilgrim, who visited the North-West in 520 A.D., observes that two generations had passed since the country had been destroyed by the White Huns and that the first of the White Hun Kings in India was by name Laelih. Possibly Jabula or Jarava was his

[1] The 5 coins of Vāsudeva are of two types, *viz.*, King at altar, with Śiva and Bull on *rev.*, and the same with seated goddess holding cornucopia on *rev.*

[2] *Ob.*, King at altar; *rev.*, seated goddess with cornucopia.

successor. Whoever the latter was, there can be little doubt that his reign fell towards the close of the 5th century A.D., and judging by the worn condition of the coins found in this monastery, we may be sure that they could not have been destroyed until the last years of that century.

Of the stucco heads and other fragments found lying in the Stūpa Court, there are only three that call for remark, all apparently heads of lay-worshippers. They are reproduced in Plate XC, figs. *a*, *b* and *c*. The first (height 5·5") is of unusually good workmanship, the modelling being free and plastic and the technique suggestive of terra-cotta rather than stucco. The second (height 6·37") wears a conical cap or helmet over his long hair; from his sparse moustache and oblique eyes he seems to be of Mongolian extraction. The third (height 5·62") is perhaps a portrait head; the eyes are wide open and prominent, the eyebrows highly arched, the nose broad and bulbous, the cheeks full and the underlip loose. Another piece of carving which was found in the monastery court is a small statuette of slate stone, possibly of Hāritī. The goddess is seated on a cushioned seat and is wearing a *sārī*, necklace and bangles. In her left hand are what appear to be two lotuses, but the tops are unfortunately broken.

It remains to add that to the west of the Main Stūpa are the ruins of another group of buildings, but at this point the site has been so eroded and damaged by river floods that they are hardly likely to repay excavation. The row that faces east towards the Main Stūpa appears to have contained chapels rather than cells, the doorways being too wide for cells and the walls being plastered with lime stucco instead of clay, as they invariably are in the monasteries.

The Kālawān Site.

The Buddhist settlement at Kālawān is far more extensive than that of Bhamāla, and one of the largest in Northern India. It is situated on the north side of the Margalla spur, about 2½ miles S.E. of the old Bhir Mound city. From an inscription found on the spot it appears that in ancient days its name was *Chaḍaśilā*, but no trace of this name has been preserved among the surrounding hamlets; to-day the place is known as Kālawān or "The Caves", from the presence of three small caves in the hillside, which the farmers use for the storing of their hay and grain. Near these caves, jutting out from the steep face of the spur, are various natural ledges of rock, of which three are occupied by Buddhist buildings: the largest of the three in the middle, and the smaller ones above and below it. (Plate XCII, which shows a view of part of the buildings on the middle ledge taken from above.)

The position, as usual, was a well-chosen one, having the advantage of being on the cool side of the hill and commanding a singularly fine view both of the valley to the north, with its winding stream and pleasantly terraced cultivation, and of the rugged overshadowing heights behind it on the south, while at the same time affording the monks a ready way of escape into the Murree Hills, in case of hostile invasion.

Water was obtained from a well which still exists near the western foot of the hill. But carrying it up the steep hillside must always have limited the

supply; though it was doubtless regarded as a valuable exercise and discipline for the novices to whom this duty fell, and it may be that help, too, in this matter was contributed by the lay-brothers or others who came to pay their devotions at the *stūpas.* From the plan reproduced in Plate XCI it will be seen that the remains on the middle terrace cover an area some 450′ from east to west by 270′ from north to south and comprise a Stūpa Court (A) on the north with three large Courts of Cells (B, C and F) and other monastic rooms or halls to the south. These buildings are not all on the same level, nor are they all of the same age. The Court of Cells C stands on a terrace 17′ above the Stūpa Court A, 14′ above the Court B, and 19′ above the Court F, A being 3′ lower than B and 2′ higher than F. Moreover, while the Hall E 2 connects with the Court F on the lower level, the Court E, which adjoins it on the south, is on the higher level and connects with the Court C.

As to the relative ages of the various buildings, I shall indicate them more precisely when I come to discuss the buildings individually. In the meantime, let me say that there are, in the main, three different classes of masonry represented here, namely, (1) a small diaper masonry similar to that found in Chapel G 5 and other contemporary buildings at the Dharmarājikā Stūpa. In this particular type of small diaper the small stones in the interstices between the bigger boulders are not very thin, and a definite suggestion of courses is given by the clearly-marked horizontal lines of small stones, which seem to be preparing the way, as it were, for the semi-ashlar style, which was to come later. This type of diaper masonry is readily distinguishable from the earlier type of Parthian times, which is found, for example, in the Apsidal Temple in Sirkap. (2) A later and rougher type of diaper masonry of a somewhat nondescript character. In this type relatively thick stones are freely used, as they are used in semi-ashlar, for filling up the interstices between the boulders. (3) The still later semi-ashlar masonry. All the buildings, however, of the first and second styles were repaired to a greater or lesser extent in semi-ashlar masonry. On the other hand, some of the later semi-ashlar structures are built on the ruins of earlier ones, the plans of which can only be surmised.

In the Stūpa Court A the plan of the monuments is unusual. In such courts, the outstanding feature is generally a central *stūpa* which overshadows all the subsidiary *stūpas* and chapels around it; but here, at Kālawān, the central Stūpa A is of relatively small dimensions: little larger than the Stūpa A 12 alongside it, and certainly not large enough to dominate the rest of the monuments. This relative insignificance is partly due, no doubt, to the fact that at the time when these monuments were first erected there was a tendency to favour the apsidal temple with a *stūpa* inside it (*grihastūpa*), at the expense of the older open-air type such as the great Dharmarājikā. But another reason was that the small central *stūpa* at Kālawān was more proportionate to the size of the original monastery, which was far less extensive than it eventually became.

The original structure of the Main Stūpa A 4 is built of the first type of diaper masonry noted above (Plate XCIII, *a*).

At a later date—possibly in the third or fourth century A.D.—large sections of the original walls of Stūpa A 4 were repaired in the second type of nondescript masonry, and still later—in the 5th century A.D.—a plinth was added around its base of semi-ashlar limestone masonry with stunted Corinthian pilasters of *kañjūr*. At the back of this plinth the pilasters of the older structure are still preserved.

A feature of particular interest in this *stūpa* is the unusually large size of its circular relic-chamber, which is no less than 13′ 3″ in diameter, with walls which start to cove inwards from a height of between 2 and 3 feet above the floor. On the inner face of these walls were several layers of whitewash which appeared to indicate that the chamber was repainted from time to time; but, if this was so, the question arises as to how the chamber was entered and for what special reason this particular relic-chamber was not permanently closed, like the relic-chambers of other monuments of this class. A similar problem is presented by the great Kushāna Stūpa at Mohenjo-daro[1] in Sind, the relic-chamber of which was also circular and finished off inside with mud plaster. In that case the evidence was not so clear as it is at Kālawān, and I was inclined to take the view that the interior of the drum had been filled in and covered with a dome of the customary pattern. With the discovery, however, of this Stūpa at Kālawān, it is necessary to reconsider this view, since it is quite certain that in this case the chamber could not have been filled in.

The remains of the five small *stūpas* A 6 to A 10 in front of the main edifice and of A 11 near its S.W. corner, call for no remarks, since they are similar in all respects to scores of other small monuments of this class and contribute nothing to our understanding of the Kālawān group. The only one among them that contained any relic deposit was A 9 which stands at the western side of the approach to the Main Stūpa. The tiny relic chamber of this Stūpa, measuring 7″×7″×5″, was hollowed out of a single block of *kañjūr* and closed by a limestone slab. In it was a small spherical casket of steatite containing a few fragments of bone. The casket, which has a diameter of 2·37″, is provided with a circular lid sunk in its surface and is decorated with six lotus rosettes in circles. The Stūpa itself, which is standing to a height of 2′ 6″ only, is built of limestone diaper with a facing of *kañjūr*. Of the Stūpa A 12, which stands immediately to the east of the Main Stūpa, nothing but the plinth-base has survived. It is constructed of small diaper faced with *kañjūr* and finished with lime plaster, and is evidently of about the same date as the Main Stūpa. The face of the plinth was relieved with a series of Corinthian pilasters resting on a moulding of the customary torus and scotia form.

The Stūpa-shrine A 14, on the other side of the Main Stūpa, is also of the same age and built of the same kind of diaper masonry. Over all, it measures 39′ 3″ from north to south and 21′ 4″ from east to west and is standing to a height of 4′ 6″ above the courtyard level. The original structure comprised only the Stūpa chamber and porch in front of it, with some steps leading up to the latter. Then another approach was added over the original steps and a new flight of steps

[1] *Mohenjo-daro and the Indus Civilization*, Vol. I, p. 115.

provided in their place. This addition was also of diaper masonry but of the later nondescript type referred to above. Finally, two small image shrines of semi-ashlar masonry (A 27 and A 28) were built against its back wall.

The plinth decoration of this building takes the stereotyped form of Corinthian pilasters standing on a moulded base with a dental cornice above and notched Hindu brackets inserted beneath the architrave. Doubtless this decoration was renovated many times during the four centuries of the building's existence, but it seems to have preserved its original form to the end, and, thanks to its good preservation on the western face, it still affords an interesting illustration of characteristic Kushāna work. The floor within this shrine, which is some 3 feet above the pavement of the courtyard outside, is composed of pounded *kañjūr* stone and mud. The small *stūpa* inside the sanctum is circular in plan and no doubt contemporary with the rest of the building. Unfortunately, little of it has survived and there was no trace of any relic.

Of the buildings which encompass Court A on its four sides, the most important by reason of the finds made in it is the Stūpa-Shrine A 1, which along with the adjoining Shrines A 13 and the smaller Chapels A 15, A 16 and A 17, forms a solid block of buildings on the eastern side of the court. The oldest part of this block is the Shrine A 1, which consists of a square ante-chamber with an entrance on its western side and an octagonal shrine behind, containing a small circular *stūpa*. This original structure was built of small diaper masonry resembling that used in the Main Stūpa with which it was contemporary. Not long after its erection, however, it was laid in ruins, probably by an earthquake; and when rebuilt some of the *débris* appears to have been left where it had fallen, and. instead of the new walls being built directly on what remained of the old, they were built on this layer of fallen *débris* which in places is as much as a foot thick. Subsequently, the interior of the shrine seems to have been cleared of this *débris* down to the level of the original floor. That this reconstruction took place not many years after the first building, is clear from the fact that there is no perceptible difference in the character of the old and the new masonry.

The next stage in the history of this block was reached when another *stūpa*-shrine, A 13, was erected against the south wall of the existing one; at the same time a terrace was constructed along the back and sides of both shrines, so as to give extra support to their foundations—a support which, in the case of A 1, was likely to have been specially necessary, since its walls, as we have seen, had been erected by nothing more solid than a layer of *débris*. Still later—and this marks the fourth stage of building—came the erection of the three small Chapels A 15, A 16 and A 17 against the south wall of A 13 and also of the bench round the base of the walls inside the fore-court of A 13.

Fifthly and finally, the ante-chamber of A 1 was repaired in late rubble and semi-ashlar, and its floor very roughly paved with tiles of blue glass obtained from some older building. To this same late period (probably the 5th century A.D.) belong the square *stūpa* in A 16 and the projections round the base of the walls in the Chapels A 15 and A 16.

The Shrines A 1 and A 13 are both raised about 2′ 6″ above the surrounding courtyard, from which they were approached by steps, now missing, on their western side. In plan, neither of these buildings was quite symmetrical, being narrower across the front than across the back. This irregularity, as may be seen from the plan, is particularly noticeable in A 1. The length of this building from east to west is just on 50′, its width at the middle 26′ 6″, while the nave measures 18′ internally from east to west, and the apse 19′ 6″. Inside the nave, against the north and south walls, were two low benches, once intended probably for images, but later on the floor-level of the nave between them was apparently raised by covering it with a layer of *débris,* and paved over in haphazard fashion with the tiles of blue glass referred to above.[1] The floor of the apse had been paved from the start with stone flags, of which some fragments still survive. The small circular *stūpa* in its interior is 11′ in diameter but stands no more than 2′ 6″ above the floor. By a lucky chance, however, the relic-chamber and its contents were found intact. It was formed, very roughly, by hollowing out a small square block of *kañjūr* and closing the top with another slab of the same stone, the diameter of the whole being 6·5″. On this was laid a 9″ layer of pebbles set in mud, and over this again a heavy slab of limestone. In the chamber was a casket of steatite in the form of a small *stūpa* (height 6·37″) surmounted by a square *harmikā* and three umbrellas (Plate XCIV, *a*). The surface of the casket, including the umbrellas, was covered with gold-leaf. Inside it was another spherical casket (diameter 1·87″) also covered with gold-leaf (Plate XCIV, *b*) as well as the following objects:—

12 rosettes of thin gold-sheet, diameter about 0·62″;
1 gold disc, diameter 0·55″;
16 rosettes of silver-sheet, diameter about 0·8″; and
2 discs of silver, 0·42″ and 0·6″.

The smaller spherical casket contained:—

1 cylindrical flat gold casket (0·7″) with some fragments of bone inside;
1 barrel bead of yellow quartz, length 0·5″;
2 barrel beads of beryl, length 0·5″ and 0·42″;
6 pearls, diameters 0·1″ to 0·18″;
1 decayed bead of bone;
1 garnet, diameter 0·26″;
2 green glass beads, diameter 0·25″;
1 piece of turquoise, length 0·25″;
2 pieces of thin gold-sheet, length 0·48″; and
3 fragments of bone, length 0·1″ to 0·28″.

Besides the *stūpa*-shaped casket was a copper-plate measuring 8·87″ by 2·65″ with the following inscription engraved in Kharoshṭhī characters. I give the text and translation as published by Professor Sten Konow in the *Journal of the Royal Asiatic Society*, October 1932, pages 949 sqq.

[1] Similar glass tiles both of blue and other colours were found in Chapel F 1 as well as in the *pradakshiṇa* of the Dharmarājikā Stūpa.

TEXT:

(Line 1) Saṃvatśaraye 1 100 20 10 4 ajasa śravaṇasa masasa divase treviśe 20 1 1 1 imeṇa kṣuṇeṇa Caṃdrabhi uasia (2) Dhraṃmasa grahavatisa dhita Bhadravalasa bhaya Chaḍaśilae śarira praïstaveti gahathu-(3)bami sadha bhraduṇa Ṇaṃdivaḍhaṇeṇa grahavatiṇa sadha putrehi Śameṇa Saïteṇa ca dhituṇa ca (4) Dhramae sadha spusaehi Rajae Idrae ya sadha Jivaṇaṃdiṇa Śamaputreṇa aya-rieṇa ya sarvasti-(5)vaaṇa parigrahe raṭhaṇikamo puyaïta sarvasvatvaṇa[1] puyae ṇivaṇasa pratiae hotu.

TRANSLATION.

"In the year 134 of Azes, on the twenty-third—23—day of the month Śrāvaṇa, on this date Candrābhī, the female worshipper (*upāsikā*), daughter of Dharma, the householder (*gṛhapati*), wife of Bhadrapāla, establishes relics in Chaḍaśilā, in the *stūpa*-shrine, together with her brother Nandivardhana, the householder, together with her sons Śama and Sacitta and her daughter Dharmā, together with her daughters-in-law Rajā and Indrā, together with Jīvanandin, the son of Śama, and her teacher, in acceptance of the Sarvāstivādas, having venerated the country-town; for the veneration of all beings; may it be for the obtainment of Nirvāṇa."

The presence of this record in the shrine is of the more importance, because it fixes the date of the building as within two years of the Shrine G 5 at the Dharmarājikā Stūpa which contained the silver scroll inscription of the year 136 and which is also built of the same kind of diaper masonry. The inscription is also of particular interest in that, like the silver scroll inscription, it contains the word *ayasa* (here appearing as *ajasa*) as to my interpretation of which there was so much discussion. As Professor KONOW has already pointed out, the occurrence of the word in this inscription before *Śravaṇasa* in line 1 clearly proves that the word *ayasa* cannot, as has been supposed, be equivalent to the Sanskrit *adyasya*, but confirms my interpretation of it as the genitive of *aya*, the Kharoshṭhī equivalent of the Greek *Azes*.

To return, however, to the Shrine A 1: The relics described above were not the only objects of value found in it. Lying in the *débris* round above the *stūpa* in the octagonal apse were eighteen pieces of stone sculpture in the Gandhāra style, sixteen carved out of dark grey phyllite stone and two cut of chloritized mica schist. Evidently these sculptures had decorated the walls of the *stūpa* or of the shrine and must have been in the shrine until its final destruction in the 5th century A.D. In Gandhāra itself it was usual, as we know from Sīkrī and many other sites, to adorn both chapels and *stūpas* with friezes, architraves, capitals and other architectural members carved in relief; and it would be natural for us to suppose that these carvings found in Shrine A 1 at Kālawān were also employed in this way for the embellishment of the interior, particularly as this shrine is built of the same masonry and dates from the same period as Shrine L at the Dharmarājikā, where the only other large group of Gandhāra sculptures has been found at Taxila.

[1] Read *-satvaṇa*.

But when we turn to the sculptures themselves and examine them in detail, we find that they are of so very heterogeneous a character, that it is impossible to assign them to one and the same date, or to imagine them as having belonged to a single uniform scheme of decoration. Let the reader look for example, at Plate XCIV, *e* and mark how well modelled are the figures of Māyā lying on the couch and of the attendants standing near her, and how very Hellenistic in feeling is the composition of this group, with the figures standing out clear and detached and without any crowding against the flat background. This particular relief may well be a characteristic specimen of Gandhāra art at an early stage in its evolution, when Hellenistic influence was relatively vigorous on the N.W. frontier, and if I am right in believing that the Gandhāra School took its rise during the Parthian period in the 1st century A.D., this is just the sort of relief work that we should expect to find towards the close of that century. The same remarks also apply to a fragmentary group of figures who appear to be gazing upwards in surprise at a miracle, though in this case both the composition and the modelling suggest that it was somewhat later than the Nativity scene. But there are other reliefs and statues of the Buddha in which the figures are squat, their expressions fatuous, and their style, as well as details, such as we cannot but attribute to a decadent phase in the history of this school. Now, we must not, of course, expect the reliefs of any one period to be all of equal merit. There must always have been marked differences of style and much inequality of workmanship according to the varying abilities of the sculptors; but in this group of Kālawān carvings the differences are much too fundamental to be accounted for in this way. The only possible explanation is that the reliefs were executed at widely different periods and dedicated here by pilgrims from beyond the Indus, just as Gandhāra reliefs were occasionally dedicated at other Buddhist centres such as Mathurā, Sārnāth and Bodh-Gayā. That they should have been kept mainly in one chapel rather than scattered about over many, was natural enough, since it could certainly not have contributed to the appearance of the buildings to have had a medley of these reliefs inset here and there in their plastered walls. The same practice of keeping these votive reliefs together in one building appears to have been also followed at the Dharmarājikā, where the majority were discovered in or around Building L;[1] and in that case it is also significant that they are almost as varied in age and style as the group at Kālawān. All the evidence obtained at Taxila—and it is very considerable—combines to show that the buildings L at the Dharmarājikā and A 1 at Kālawān were erected at a time when the Gandhāra School was already at its zenith and it is only to be expected, therefore, that Gandhāra sculptures should be associated from the first with buildings of this particular class, albeit they were used as depositories only of these votive offerings. Gandhāra sculptures are seldom found in the later buildings of semi-ashlar masonry; since the school had died out before ever these buildings came into existence.

To return, however, to the buildings in the Stūpa Court at Kālawān. In the Shrine A 13, which adjoins A 1, there are the same kind of low benches against the two side walls, which served, as I have said, for the exhibition of statues or

[1] One Gandhāra relief only was found in an isolated position at the Dharmarājikā Stūpa.

other sculptures which could not be affixed to the walls. In this *grihastūpa*, as the inscription calls this class of building, the inner chamber containing the *stūpa* takes a square instead of an octagonal or round form, with a measurement of 22′ each way, the antechamber being 21′ by 16′ and the doorways having a width of 12′. The circular-shaped *stūpa*, which is constructed of the same kind of masonry as the walls, was divided into diminishing terraces or drums with a small projecting plinth (10″ × 10″) at the foot.[1] Just below its foundations was brought to light a spherical casket of talcose schist (diam. 4·12″), decorated with bands of incised cross-hatching and an eight-petalled lotus. Inside it was a cylindrical casket of silver (height 1·37″) and inside this again a smaller cylindrical casket of gold containing two small fragments of bone. It is noteworthy that in this *stūpa* the stone relic casket was not protected by a relic-chamber but laid directly in the earth below the foundations, as the practice had been in the Scytho-Parthian period, but was not customary at this time.

This shrine appears to have been reduced to ruins and re-built in part at the time when the three small chapels A 15 to A 17 were erected against its southern side. This is clear not only from the coarser character of the masonry used in the rebuilding, but from the fact that there is no dividing line between the walls of A 13 on the one hand, and of A 15 to A 17 on the other, so that, at first sight, it looks as though they must all have been erected at one and the same time. That this, however, was not the case is conclusively demonstrated by the fact that, as already stated, the low supporting buttress which was built around Shrines A 1 and A 13 on their north, east and south, runs *under* the party-walls between the three chapels as well as under the small square *stūpa* in A 16; and, inasmuch as this buttress was a subsequent addition made to A 1 and A 13, it follows that both these structures must be older than the Chapels A 15 and A 17. Let it be added that the remains of the *stūpa* in A 16 are very fragmentary, but enough to indicate that it was erected in early mediæval times—probably in the 5th century A.D.

Opposite to the foregoing buildings, on the west side of the Stūpa Court, is another row of four shrines, A 31 to A 34. These were originally built of small diaper masonry and were in all probability contemporary with the reconstruction of the *grihastūpa* A 1, but later on were repaired in various places with semi-ashlar masonry. Unfortunately, the greater part of the back chambers in three of them, and a corner of the fourth, have collapsed and fallen down the hillside. This is particularly to be regretted in the case of A 33, since it occupied a position directly opposite to A 1, to which it appears to have been a counterpart, and there is every likelihood, therefore, that interesting relics might have been found in it.

Of the buildings above ground on the north side of the Court, A 5 consists of a large chamber approximately 35′ square, with a smaller rectangular chamber inside, which no doubt contained a cult statue, and between them a narrow passage for the *pradakshiṇa* of the faithful. In front of it, to right and left of the entrance, are two small chapels, both containing plinths for images. All

[1] The lowest drum is 2′ 10″ high with a projection of 1′ 3″ beyond the face of the one above it.

three structures are of late semi-ashlar masonry. Beneath them are the remains of an early *stūpa* or chapel with a large plinth, about 43′ square, and a stepped approach on the south side, which can be seen on the plan between the two small chapels referred to above. Beneath this *stūpa*, again, is a still earlier structure, the foundations of which descend to a depth of about 3′ 9″ below the level of the court. Both of these structures are of diaper masonry, the lower of the two being probably contemporary with the original building of A 1; the upper with its reconstruction.

The Shrine A 2 is a double-chambered rectangular building in the semi-ashlar style and of the same period as A 5, with a wide doorway between the two chambers and a stepped approach of *kañjūr* stone leading up to its plinth. In front of it, to the left of the entrance, is a small chapel, and between it and A 5 are the remains of two small *stūpas*. The latter, which are below the present level of the court, appear to be contemporary with the plinth under A 5.

On the south, the Stūpa Court is bounded by a raised terrace surmounted by a number of small chapels (A 18 to A 26), of varying sizes and dimensions. and the remains of a small *stūpa* (A 23). The reason for the raised terrace on this side is that the rocky ledge upon which this group of buildings stands rises somewhat at this point towards the hillside on the south, and it was easier for the architects to raise an elevated terrace for their structures than to cut away the rock; and this explains also why the Courts of Cells B and F and the Halls E 1 and E 2 are on such different levels.

Most of the chapels on this terrace are raised only about 3 feet above the level of the court, but the small Chapel A 22 near the middle of the platform was almost on the same high level as the Court of Cells C, *viz.* 17 feet above the Stūpa Court A, and was approached by a lofty flight of steps which ascends from east to west against the face of the terrace. The prominent position of this chapel, overlooking the Main Stūpa, may be assumed to be due to nothing more than the presence of a small rocky eminence at this point, but this assumption has not yet been tested by actual excavation. Both this and the other chapels, as well as the terrace under them, were approximately contemporary with the Main Stūpa A 4 but their walls were afterwards patched up in many places either with the later kind of nondescript diaper masonry previously alluded to, or with semi-ashlar masonry. The narrow plinth in front of chapels A 19 to A 21 is a later addition in the semi-ashlar style. At the eastern end of this plinth, between A 19 and E 2, a flight of steps led up to the higher level of Court C. Originally, the whole of this flight was of stone, but it seems that in later days some of the steps were removed and a short wooden ladder substituted, which could be taken away at will. The square Stūpa A 23 appears to have been contemporary with the chapels, but like them to have been rebuilt. To the west of it is a low rectangular plinth (A 24), which possibly is the base for another *stūpa*. All the chapels on this side contain low benches inside for images.

Apart from the sculptures recovered in the apsidal Shrine A 1, many other interesting pieces were unearthed in the Stūpa Court. Most of them are of stucco and were found round about the two large *stūpas* A 4 and A 12, which

they had doubtless served to decorate, but several stucco fragments were also lying in the vicinity of the small *stūpa* A 3, of which a few vestiges only have survived, at the back of Shrine A 1. These stucco sculptures number over seventy pieces. All are characteristic work of the Indo-Afghān School, but for the most part not so well preserved nor so instructive as the stuccos from Mohrā-Morādu, Jauliāñ, and other sites. There is one feature, however, of the specimens from Kālawān which deserves more than passing notice. I refer to the unusual cast of countenance which distinguishes a number of the heads: the somewhat short nose, full cheeks, prominent chin and full and pronouncedly curved lips (Plate XCIV, *c*). This particular facial type, which occurs but very rarely in the sculptures from other sites, is evidently peculiar to one sculptor or possibly to a family of sculptors, who were engaged almost exclusively, so far as Taxila is concerned, on the monuments at Kālawān. It would be interesting, however, to know if the same type, which is easily recognisable, is represented among the collections of 5th century stucco heads from other sites than Taxila; for we cannot suppose that such a sculptor would remain all his life in one place. The probability is that he would move from monastery to monastery, getting contracts wherever he could for the decoration of newly-built *stūpas* or the renovation of old ones.[1]

The few fragmentary pieces found round about the little Stūpa A 3 belong to a class which is specially common among the small square-based 5th century *stūpas* at Jauliāñ, and indicate that Stūpa A 3 was of the same age and character, but they are not of sufficient interest in themselves to merit individual description.

Along with the above stucco sculptures there were also found seven broken Gandhāra stone sculptures lying here and there in the court and not referable to any particular *stūpa* or chapel. The only one of note among them is a slab of phyllite (ht. 8·9″) which was found a little to the south of A 15. On it, carved in relief, is an ascetic seated cross-legged inside his hut, with a fire-altar in front of him. Beneath, in the lower register, is the single head of an attendant figure (Plate XCIV, *d*). In style this relief compares well with any sculpture of the same school from Taxila, and may be assigned with confidence to the best period of Gandhāra art. Another broken piece, also of phyllite, from in front of A 17, is an image in high relief of the Fasting Buddha seated in meditation on a high throne (ht. 6·5″). It is the only example of this somewhat rare subject that has been found at Taxila. The other five pieces comprise two torsos of Bodhisattvas, the lower half of a figure of Maitreya standing on a lotus and holding a nectar flask in his left hand (Kn 388) and the fragment of a trefoil arch in the form of a scaly-bodied creature with turbaned head and eagle beak (Kn 422).

Court of Cells C.

The high terrace at the back of the chapel described above—17′ above the Stūpa-Court—was occupied by the monastic quadrangle C and a group of rooms

[1] I believe that this artist must have visited Hadda; see *Les fouilles de Hadda*, Vol. III: *Figures et figurines*, (Paris: 1930), *e.g.* plates 14, 21, *etc.*—Editor.

or halls connected with it on its eastern side, *viz.* D 1 to D 7 and E 1, the quadrangle B being on the lower level to the west and the quadrangle F with the Hall E 2 on the lower level to the east. The quadrangle C is unusual in plan, containing only two rows of cells, one on its western and one on its southern side; but there is a group of small chambers outside the court at the N.E. corner, *viz.* D 3 to D 7, two or three of which may have served as cells. The entrance at this point (A 18) appears to have been by way of the passage D 6 and so through D 4, but inasmuch as the doorways of this chamber have perished, we cannot be sure of the communication between them.

In the quadrangle itself, although there are cells on two sides only, the verandah plinth is carried round all four sides, its full width being between 10′ 6″ and 11′ 3″; on the south and east sides a narrower section, only 8′ wide, was subsequently added, apparently for the purpose of increasing its height. The drain through which the water escaped from the open depression in the middle of this quadrangle was carried under Cell 8 and discharged onto the hillside at the back.

In Cell 6, near the S.W. corner, is a staircase of late date leading to the upper storey, which was probably built to replace an older staircase of wood. In early mediæval times Cell 2 seems to have been converted into a strong-room by rebuilding its front wall and eliminating the doorway, the only means of access afterwards being through a trap-door in the upper storey. A similar strong-room was, as we know, constructed in one of the cells in the monastery at Mohrā-Morādu. In the adjoining Cell 3 there is a bench against the back wall which suggests that this cell was converted at some time or other into a chapel, since in the Taxila monasteries benches of this kind appear to have served invariably as pedestals for images, never as couches for the monks, as they did in some of the rock-hewn monasteries of the Dekhān and Western India.

Of the remaining apartments on this terrace, which were directly connected with this Court of Cells C, *viz.* D 1, D 2, and E 1, the last mentioned measures 40′ by 42′ and was undoubtedly the Hall of Assembly, being planned in the usual way with four wooden pillars (of which the bases of two only have survived) to support the roof. What was the original purpose of D 1 and D 2 is not certain. In later days the former may well have been used as a refectory and the latter as a kitchen[1] as corresponding rooms at Jauliāñ were used; but this is hardly likely to have been their purpose when the monastery was first erected at the end of the 1st century A.D., or thereabouts, since there is no evidence of kitchens and refectories having been built at that early period.

On this terrace, as already indicated, the rock is very near the surface, having been cut away and levelled on the southern side, but somewhat sloping down towards the north. On the East and West there were sharp natural scarps, which again were partly cut away to make room for the walls of the quadrangles B and F and of the Assembly Hall E 2, which belongs to the latter. Both of the Courts C and F were built in the early diaper style of masonry at the same time as the most important of the monuments in the Stūpa Court, and both, it need

[1] This conversion may have taken place when the existing south wall was built in semi-ashlar masonry.

hardly be said, were largely patched up in later days. On the other hand, the quadrangle B was a later construction, built exclusively in the semi-ashlar style.

In this part of the monastery minor antiquities were very rare, the only one that deserves mention being a small stucco head of the Buddha (ht. 4·9″) with a dark buff slip and traces of red paint on eyes and lips and of black paint on the hair (Kn 406).

Court of Cells F.

Though not so large as the Court B, the Court F is a spacious one, measuring 112′ north to south by 105′ east to west (Plate XCIII, *b*). It was provided with cells on three sides only: the south, west and north. On the east, the ground slopes rapidly away and no doubt it was judged too hazardous to erect cells on the somewhat insecure foundations that had to be built up on this side, and, as it turned out, the hazard proved all too real; for, as the reader will perceive from the plan, half the length of the circuit wall together with the N.E. corner has collapsed down the hillside, while at the S.E. corner it was soon found necessary to erect a massive supporting buttress.

The remains of the four Chambers 25 to 28 north of this buttress have an orientation different from that of the Monastery Court and evidently belong to an older structure which was partly demolished to make room for the later monastery (?). What remained of this structure was filled in, and over the ruins was carried the stepped approach which ascended the hillside from the east and entered the monastery through a small gateway immediately above Chamber 26. A few of the steps belonging to this approach still survive on the east side of the buttress 24.

This entrance on the east was only a subsidiary one. The main entrance appears to have been through Chamber 2 on the north side, which was the most natural position for it, if the monks were to have direct and convenient communication with the Stūpa Court.[1]

Apart from the fact that there are no cells on its east side, the lay-out of the court exhibits no exceptional features. The depression in the centre is approximately 54′ each way, but not a true square; the verandah plinth is about 15′ 6″ broad, with its supporting pillars aligned at a distance of about 2′ 9″ from its inner edge. In the S.W. corner of the depression are the remains of the usual bathroom with its floor sloping towards the east, where the water was carried off through a drain which passed under the verandah plinth and discharged at the back of Chamber 20.

Of the twenty-six chambers ranged about the three sides of the Court, No. 2 served, as already stated, as a lobby to the entrance on the northern side; another (No. 9) was the passage-way into the Hall of Assembly E 2; a third (No. 20), almost directly opposite to the main entrance, was reserved, as shown by the bench around its walls,[2] for use as an image-chapel, and a fourth (No. 15), in the S.E. corner, was occupied by a double flight of steps leading to the upper storey.

[1] In mediæval times this entrance was blocked up but two of its steps still exist at the back of the Chamber.

[2] The entrance of this chapel extended across its entire width, and two small columns were inserted to support the architrave.

Thus, there were left twenty-two cells on the ground floor for the *bhikshus* to live in, which, added to about twenty-five on the floor above, would make a total of about forty-seven in all. But of those on the ground floor, No. 12 was subsequently occupied by a small *stūpa* erected, we may suppose, like the one in the Mohrā-Morādu monastery, to commemorate the residence of some specially revered brother, and probably containing his ashes. In its final form this monument was of a strangely unusual and bizarre character. Originally, it appears to have been an ordinary square *stūpa* of the orthodox type, adorned with four Corinthian pilasters on each side and provided no doubt with the usual drum and umbrellas. But later on the drum and dome were removed and replaced by a great Corinthian capital with a double circle of lotus leaves breaking outwards from its base, and with a drum and dome—much reduced in size—on the top of it. This strange creation was constructed partly of *kañjūr* or terra-cotta, partly of clay, but the clay has been half burnt to terra-cotta in the fire which destroyed the whole of this group of buildings.

On the floor by the side of the *stūpa* in the same cell were found two striking portrait heads of burnt clay, one male and one female (Plate XCV, *a* and *b*). In all likelihood they represent the donor of the *stūpa* and his wife, the latter on a much smaller scale than her husband, as she is in the large clay group at Jauliāñ. Both heads are of clay—half-burnt to terra-cotta—and the modelling is executed with an unusually free touch. The male is 7′ 9″ high, the female 4·75″ high.

Another noticeable feature in this court is the construction of the party-walls between Cells 2 to 5 on the north side, only the base of which is of solid stone, the upper part being of mud which is now half converted into terra-cotta. Somewhat similar walls were also unearthed at the monastery of Pippala, but there the upper part consists of stone boulders or pebbles and mud combined. Here it is entirely of mud. No doubt it was for the sake of economy that mud was used in place of stone, and it is quite likely that many of the other party-walls were at first built of the same material and the mud subsequently replaced by stone, as funds became available. The existence of stone plinths of a similar kind in many other monasteries in this neighbourhood points to the practice of building walls in this way having been a common one, though in no other instance has the superstructure of mud survived.

Owing to the configuration of the site, which necessitated the western side of Court F being built against a steep scarp of rock, there was a deep accumulation of *débris* on this side and the ruins beneath were better preserved than usual. Thanks to this circumstance and to the conversion of the mud plaster into terra-cotta we are able to follow quite clearly the construction of the doorframes. The timber of these has, of course, been reduced to charcoal or destroyed by white ants, but from the chases which have survived it appears that there were four vertical beams sometimes connected with cross-pieces to support the heavy lintels, and that the spaces between these beams were filled in with mud or with piles of small stones plastered over with mud. In the absence of relieving arches, which are unknown at Taxila, or of solid stone lintels, strong frameworks were, of course, indispensable to carry the weight of the diaper masonry above.

In front of Cell 1 was found a small head of the Buddha in the Gandhāra style (ht. 4·75"), of chloritized mica schist. From the corner cell No. 7 came a number of objects associated with Buddhist worship, *viz.* several copper-gilt bell handles (Kn 332, 347, 354), umbrellas (Kn 343), a *triratna* (Kn 339) and a lotus (Kn 355), but none of them is of particular value in itself. The adjoining cell, No. 8, contained the head of a bracket figure of phyllite (Kn 374) with elaborate head-dress and snake-hood behind, and a hoard of copper coins. The latter comprises one issue of Soter Megas (*Obv.*: bust of king; *rev.*: king on horseback) and 118 of Vāsudeva, *viz.* 91 of the "Siva-and-Bull" type and 27 of the "Goddess-and-Cornucopia" type. Evidently this hoard had been hidden, during the reign of Vāsudeva, in a hole in the wall, probably above the doorway, and had remained there for some three hundred years until the wall itself collapsed during the wholesale destruction of the monastery.

The Assembly Hall E 2 calls for no remark, except that it is contemporary with the Quadrangle F, to which it is attached, and that its diaper walls were subsequently patched up in various places, but not during the latest period when semi-ashlar masonry was in vogue.

Court of Cells B.

From Court F we have now to retrace our steps through the Court of Stūpas to the third Court of Cells B, the entrance to which is in the S.W. corner of the latter court, just below Chapel A 26. This is one of the largest monastery courts at Taxila, measuring over all 131 feet on its southern side by about 133 feet on the other three sides, the lay-out, like that of the other courts, being not quite regular. On the east side it abuts against the western retaining wall of Court C, and on the north against the south side of Chapel A 31, the diaper walls of which are in both cases easily distinguishable from the semi-ashlar with which the rest of the court and its cells are faced, as well as from the rougher masonry of boulders and mud which is used for some of the interior walls. On the eastern and southern sides, where the lines of cells had the protection of the higher ground at their back, the ruins are well-preserved, standing in places to a height of some 12 feet and more. On the west side and on half of the north side, where the ground outside shelves rapidly away, all the superstructure has gone and only the foundations remain. So far as its plan and architectural features are concerned there is little to be noticed in this court, which was designed on strictly orthodox lines, with cells on all four sides screened by a verandah, and with the usual bathroom on a stone plinth in the S.W. corner of the central depression. The masonry, which is typical of 5th century work, is for the most part semi-ashlar, but many of the cell walls are constructed for economy's sake of mud and boulders, like those in the Pippala monastery, thus not of mud alone, like those in Court F. All were, of course, plastered over and white or colour washed. The plaster, made of mud and chopped straw, may still be seen adhering to many of the walls on the east side. The main entrance, as already noted, was through the Chamber A 29 at the N.W. corner, but besides this entrance it is not unlikely that the stairway

in Chamber 11, which gave access to the upper storey, may have led to an exit on the higher ground at the back of the monastery and thus communicated with Court C, at the adjoining corner of which there was another staircase. Chamber 3 on the south side evidently served, like Chamber 2 in Court C, as a strong-room, only here the interior is circular in plan (diam. 6′) and paved with stone flags. From Cell 5 to Cell 10 inclusive, the back wall on the south was exceptionally thick, for the reason no doubt that greater resistance was needed at this point to the detritus on the hillside. In Cells 9 and 12 the floor level is raised about 1′ 6″ above the verandah plinth and two steps are provided—in the case of the former cell, outside, and in the case of the latter, inside the doorway. In Cell 18 there is a short length of wall inside the door to screen the inmate from observation. In earlier times, when the habitations of the *bhikshus* were exposed to the public gaze, such a screen had often been necessary, as we learn from the *Mahāvagga* where the use of screens is specifically allowed by the Master; but when monasteries came to be built on the quadrangular plan, with all the cells facing a courtyard, privacy was automatically secured and screens such as this usually became superfluous.

If, however, this court adds little to our knowledge of monastic architecture, a group of sculptures unearthed in it more than compensates for the cost and labour of digging (Plate XCV, *c*). This group was found in the small image-chapel No. 20, built out in front of Chamber 21, which, like No. 3, appears to have been used as a strong-room and entered by a trap-door from above. The group comprises some of the most remarkable and instructive sculptures in India. In the centre was a figure of the Buddha seated in the *abhaya-mudrā*, with two figures standing on his right and three on his left, making a group of six figures in all. Of the six, four were made of clay throughout, which luckily has been half-burnt to terra-cotta; in the other two figures, *viz.* the Buddha in the centre and the Bodhisattva standing on his right hand, the bodies were of clay but the heads of true terra-cotta intentionally fired in a kiln. Unluckily, the breasts and shoulders of three of the figures have perished irretrievably, but five of the heads were found lying in the *débris* and are in an excellent state of preservation. The Buddha in the centre is seated on a low throne (*siṅhāsana*), the face of which is adorned at each end with a square medallion bearing the "dot-and-comma" pattern and a highly stylized lion's foot below. Head and body alike are in the strictly conventional style of the period, with every detail worked out according to orthodox precedent, but the modelling of the face exhibits a grace and delicacy that are rarely found in heads of such large proportions (the head, including the *ushṇīsha*, is 18·1″ high), and the treatment of the drapery and of the form showing beneath its folds betray the true touch of the artist. Of the attendant figures, the one in front on the Buddha's right, clad in *dhotī* and shawl, and distinguished by a highly ornate head-dress, is a Bodhisattva. Opposite to the Bodhisattva are two smaller figures, whose raiment and shaven heads proclaim them to be monks. At the back and each side of the Buddha are *devas* bringing offerings or doing homage to the Buddha. One only of the heads of these *devas* has survived (Plate XCVI, *c*).

We thus have, in this group, four types portrayed: the Buddha, the Bodhisattva, the *deva* and the *bhikshu;* and inasmuch as the whole group is evidently the work of one hand, it affords us an excellent opportunity of comparing these four types and observing the essential differences which the artist has been at pains to bring out between them. In modelling the Buddha head (Plate XCVI, *a*) he has, of course, been under the rigid constraint of tradition, and to a large extent with the help of that tradition he has given us a clear presentment of his ideal. To him, as to all his co-religionists, the Buddha was a remote, intangible figure, who had withdrawn himself beyond the sphere of this world and beyond all human imagination. The only way to portray that figure was by following established precedent and reproducing a type which in its general lines had long since become immutably fixed. Any attempt to depart from or to modify that type would have been an impiety. The utmost that the artist could do, was to introduce into it such refinement of features or delicacy of workmanship, as were possible without transgressing the accepted rules; and this he has done with eminent success, fashioning for us a head which strictly obeys convention, and is symmetrically perfect in every detail, but which nevertheless attains a degree of sublimity and gentleness of expression such as is rarely to be seen in heads of this class.

Now turn to the Bodhisattva head of Plate XCVI, *b*, and mark the difference between the two heads. The sculptor is no longer bound to the same extent by rule and precedent. He can let his own imagination have play; nor are the Bodhisattvas remote and inaccessible beings like the Buddha. They are still relatively near to this world, presiding over the destinies of man: ready to hear his prayers, to help in his sufferings; and there is nothing, therefore, against depicting them, as the *devas* themselves are depicted, with ordinary mortal features. In this head, it is sorrow and compassion that the artist has sought, above all, to express, and in the whole range of Buddhist sculptures it would be difficult to point to another head in which these emotions are so convincingly brought out. Surely no one gazing at the pathos and compassion written in this countenance can fail to be conscious of the close relationship that exists between the cult of the Bodhisattvas and Christianity in their relation to human suffering.

The feeling and sensitiveness and the mastery over his material that the sculptor has shown in the modelling of this head are equally characteristic of the *deva* head reproduced in Plate XCVI, *c*. The figure to which this third head belongs is one of the celestial beings—angels we may call them—who frequently appear in reliefs of this period descending from heaven and offering homage and gifts of flowers to the Buddha. In this case, the *deva* has his right hand raised to the level of his shoulder, with thumb and forefinger touching one another, and no doubt the head was bowed a little forward, though not perhaps so much as in some other reliefs, where the *devas* are looking down from above on the Buddha. One remarkable feature that distinguishes the *devas* of the Indo-Afghān School is their thick and heavy eye-lids, and in this particular image the sculptor of the Kālawān head has necessarily had to follow tradition; but he has

followed it in such a way as not to impair the beauty of the face. For the rest, the head represents the artist's own ideal of beauty. Among Indian sculptures, its type is unique. Inspiration for it may possibly have been found in some Greek head of Apollo, but that is hardly likely. For, even granted that such a model may have existed at Taxila in the 5th century A.D., the style and workmanship of this head are much too fresh and forceful for us to suppose that it was merely a copy of an older original; and let it be remarked too that, although this type is so different from the other three types—Buddha, Bodhisattva and monk—which belong to the same group, there is the same characteristic subtlety and sensitiveness running through the modelling of all four, proving beyond question that their author was no mere imitator, but an artist of exceptional imagination and ability. What angels are to the Christian, *devas* are to the Buddhist —beings of radiant and surpassing beauty. Whatever else they may be, beauty of form and feature is their outstanding attribute, and in fashioning this one the artist has given us the highest type of Āryan manhood of which he was cognisant. In doing this, he to some extent departed from tradition; for like the Christian angels of the Renaissance, Buddhist *devas* were usually of indeterminate sex; at least it is very difficult to say of them whether they are meant to be male or female. But this particular *deva* is essentially and undeniably masculine.[1] That the artist made use of living models for this, as well as for the Bodhisattva and the monk, is highly probable: but whether he did so or not, there is a degree of idealism in this work that precludes us from regarding it as a simple portrait.

The fourth type is that of the shaven monk (Plate XCVI, *d*) of which there are two examples in the group (Nos. 174 and 174a). The type is identical with that of the high-caste Brahmin, which occurs so often among Buddhist sculptures and paintings of the early and mediæval times, but the characterization of the features in these two heads and their marked individuality suggest that they were probably portraits of two of the brethren in the Kālawān *saṅghārāma*.

All these heads were covered, it need hardly be said, with a coating of fine plaster and finished like the stucco heads with colours or gilding. In No. 174 there still remains the charred residue of the wooden peg by which it was made secure to the body.

In the store room No. 21, at the back of the sculptured group described above, were found a vessel lid of copper with a finial-like handle (Kn 97): as well as a bowl-shaped bell of the same material with a ring-handle and traces of gilt on its surface (Kn 138); while in front of Cell 28 was a piece of Gandhāra sculpture (Kn 292)—a bracket of phyllite stone in the form of a winged bull carrying a rider, erect with folded hands. In front of Cell 15, again, was another phyllite sculpture of the same school (Kn 302), which evidently depicts the First Sermon in the Deer Park at Sārnāth. An unusual feature of this relief is that the Buddha is represented as turning not one, but three small wheels supported on the three prongs of a *triratna* emblem on the face of his throne.

[1] The learned author must excuse me if I disagree on this point, but I must have a different notion from his on what is masculine. The head—undoubtedly an eminent work of art—is to my eyes extremely sensitive, almost sentimental; feeling entirely dominates the expression, while manly force, male energy and determination are quite lacking in it.—*Editor.*

We have now completed our description of all the monuments on the middle terrace and may turn to the few remaining ones on the smaller terraces above and below. The former, marked in the Plan G 1 to G 9 consist only of the dilapidated remains of a square chamber, G 1—possibly an Assembly Hall—with the foundations of four cells on its north side and few other broken walls further to the north. They need not, therefore, detain us, particularly as no small antiquities were found among them. The ruins on the top terrace H, on the other hand, form an interesting and tolerably well-preserved group, comprising a small compact monastery, with a square *stūpa* on its western side and the remains of some chapels or other structures beyond. The monastery and *stūpa* are built of late diaper; the chapels of semi-ashlar masonry. The Stūpa Court, as will be seen from the plan (Plate XCVII, *a*) is irregular in shape owing to the formation of the terrace, and for the same reason the *stūpa* in its centre has a different orientation from the monastery. On the south side of the court, along the compound wall, is a shallow plinth, about 10 feet in width, which on the west side in front of the Chapels 4 and 5 is reduced to a narrow strip only, with a small square projection (5′ 9″ each way) near the S.E. corner of No. 4. The *stūpa* is square in plan, measuring 19 feet each way, with projecting steps on the north. Its base, which is preserved to a height of 3′ 6″ only, was relieved with the usual mouldings and pilasters, five of the latter on each side, worked out in *kañjūr* stone.

The monastery was a strongly built structure, and, in spite of its exposed position, the ruins when excavated were still standing to a height of some 10 feet (Plate XCVII, *b*). Its plan is unique; for in place of the usual open court in the centre there is a large square hall (No. 9), and in order to admit light and air to the interior, the passages between this chamber and the cells (8, 8 in the plan) were prolonged as far as the outer walls, and tall windows contrived in the walls at both ends. By this arrangement eleven cells as well as a central hall were provided on the ground floor and probably about 20 cells above, since the upper floor would get all the light and air it required from the open court in its centre, which would not, of course, be roofed in; and thus the spaces occupied by the window passages on the ground floor would have been available for cells on the upper floor.

The entrance vestibule (7), which also contains the staircase ascending to the upper storey, opens on to the Stūpa Court on the west side of the building. Directly opposite to it, on the other side of passage 8 is a large window with splayed jambs through which the light from the entrance could be admitted into the central hall.

The doorway of the hall was on its north side: not in the centre, but pushed a little to the east of it, in order, perhaps, that the wall might not be weakened at the centre where the weight of the roof beams would be greatest. In order to secure as much light as possible, the windows at the ends of the passages were placed at a height of about 4 feet only above the floor, not 8 to 11 feet, as they invariably were in the cells; and the better to diffuse the light, they were provided with sills that slope downwards on the inside. The width of these windows

is about 3′ 3″ on the inner side; their height is not known, as none of them is completely preserved.

The only small object of interest found in this group of ruins came from the small chapel No. 6, in the Stūpa Court. It is part of a frieze of phyllite stone in the Gandhāra style decorated with four ogee arches resting on Corinthian pilasters. In one of the arched bays is a seated figure of the Buddha in the attitude of meditation; in the others are standing figures in various poses, while resting on the tops of the arches are pairs of birds.

EXPLORATION IN BURMA.

By Maung Mya.

Excavations at Pagan and Thiyipyitsayā during 1930-31.[1]

Excavation was continued at Pagan and extended to Thiyipyitsaya· during the year 1930-31.

Thiyīpyitsayā (*Sirīpacchaya*) is situated about five miles below Pagan on the Irrawaddy and is now marked by a small village of huts close to the Lokānanda Pagoda. It was, according to local traditions, the seat of a kingdom. Beginning with Thiligyaung, who came to the throne in 344 A.D. and founded that city, there reigned five kings in succession, until the year 516 A.D., when the kingdom was again shifted to Tampavatī, a few miles to the east.

The operations during the year under report were restricted to the area bounded on the south by the present Thiyipyitsaya village, on the east by the Pagan-Singu road, on the north by Myinpagan, and on the west by the Irrawaddy.

Thirty-six mounds were uncovered and many small temples and *stūpas* in ruin were examined. A feature of the *stūpas* was that a small *stūpa* was often found encased in an outer one; and the inner one was mostly in a good state of preservation.

The first *stūpa* examined is situated in the middle of a field to the north-east of Thiyipyitsaya. The outer 'envelope' *stūpa* had mostly crumbled away, but the inner *stūpa* was in a fair state of preservation, except for a hole in the dome made by treasure-hunters. (Plate XCVIII, *a*). It has a brick pedestal, 9′ 6″ in height and 8′ 2″ in breadth. A *bronze image of a seated Buddha* in the *bhūmisparśa-mudrā* measuring 7½″ in height was recovered from among the *dêbris*. Its features are Indian, and it may be assigned to the 11th-12th century A.D. (Plate XCVIII, *d*).

A further examination made round the base brought to light a brick platform which was entirely covered by a retaining wall; the 'envelope' *stūpa* was raised over this platform.

[1] The work during 1930-31 was executed by Mons. Charles DUROISELLE.—*Editor.*

A search was then made for relic chambers. There were probably four such chambers originally, one on each side of the building, but those on the west and south sides have disappeared, the one that was found intact being situated on the east side. The relic chamber on the north was evidently emptied by treasure-hunters. The following were the contents of the chamber on the east side:

1. Terra-cotta votive tablets, some in a good state of preservation, and others in fragments, found mixed with earth. They are replicas of one and the same type. Each is elliptical in shape and bears an effigy of the Buddha seated cross-legged in the earth-touching attitude on a lotus in a temple of the Mahābodhi type. He is flanked on either side by a figure, probably a Bodhisattva, wearing a crown and a high *mukuṭa*, and seated sideways in the *namaskāra-mudrā* on a lotus (Plate XCVIII, *c*). Below there is a legend in two lines in Pāli in Burmese characters of the 11th-12th century A.D.:

eso bhagavā Samben Jesalycna ka-
tā vimut[t]a[tham] saha[th]enevāti.

"This Bhagavān (Buddha) was made by Samben (a minister) Jesalya with his own hands with the object of attaining salvation". Each tablet measures $3\frac{3}{8}'' \times 4\frac{5}{8}''$.

2. Two wooden images of the seated Buddha. Both in a bad state of preservation. The height of each image is about 14″.

3. A thin gold-leaf $1\frac{5}{8}'' \times 3\frac{3}{8}''$ with a standing crowned figure. Other features of the figure are not distinct.

4. A bronze finger-ring.

5. Small beads.

6. A hairpin.

7. A pair of scissors.

The next encased *stūpa* examined was situated among a group of ruined temples and *stūpas*, a few furlongs to the north of the above and on the other side of the road near the Seinnyet temples. The outer cover was, as in the case of the first, in a ruined state. (Plate XCIX, *a*). The inner *stūpa* was better preserved. The dome with the exception of a hole made in it by treasure-hunters was fairly intact, but the portion above the dome had disappeared.

One other feature which is common to these *stūpas* is a series of relic chambers built round the terraces, besides a main or principal one in the centre of the foundations of the inner *stūpa*. The chambers round the terraces in the present instance were placed at the corners, and their contents were *terra-cotta votive tablets* of which many were in fragments due to dampness and pressure from above. The contents of the principal relic chamber consisted of an empty earthenware vessel (Plate XCIX, *b*) covered over and surrounded with terra-cotta votive tablets. All the tablets found here bear either *the seal of King Anoratha* (1044-1077 A.D.) or other marks pertaining to his period. Two of the tablets deserve special notice, *viz.*

Tablet (*A*) showing a seated figure with the left leg bent and the right pendent on a lotus throne with back surmounted by an umbrella. The figure is two-handed, wears a *mukuṭa*, a shawl covering part of the breast and both shoulders, a necklace and other Bodhisattva ornaments. The right hand is resting on the right knee and is in the charity *mudrā;* the left hand with the palm inward and fingers extending downwards is resting partly on the left leg and

partly on the thigh. A lotus with its stem rising from a side of the seat and winding round the arm is shown on the left side above the shoulder. The space below the seat and on each side of the stem supporting it is occupied by a writing in *nāgarī* characters of about the 11th-12th century A.D., which is continued in the space on the left side of the seated figure. The writing is rather faint, but as far as it can be made out it contains the Buddhist formula "*ye dharmā hetu-prabhavā, etc.*" Probably Padmapāni or Avalokiteśvara (Plate XCIX, *c*).

Tablet (*B*) represents the Buddha seated cross-legged in the earth-touching attitude on a lotus in the temple at Bodh-Gayā. Below the seat there is a Sanskrit inscription in *nāgarī* characters:

ye dham[*m*]*ā hetu-prabhavā hetumteshām-tathāgato hava-*
dat-teshā[*ṁ*] *cha yo nirodha evamvādī Śrī An*[*i*]*ruddhadeva.*

Śrī Aniruddhadeva no doubt refers to King Anoratha, and numerous such terra-cotta votive tablets were found, written both in Sanskrit and in Pāli evidently emphasizing the king's conversion to the new faith. *i.e.*, his acceptance of a purer form of Buddhism instead of the Tāntric Mahāyānism prevalent in his time. (Plate XCIX, *d*).

A *more complete example of an encased stūpa* partially exposed during the year may be seen in plate XCVIII, *b*. It was complete except for the crowning portion. The shape of the missing finial probably was that of a cone with a bulging side resting on a double lotus. What remains consists of circular rings of mouldings, a bell-shaped dome surmounting a double lotus, terraces, and a solid basement cubical in shape.

The main relic chamber of this *stūpa* had been rifled of its contents, and except eight small stone bricks with traces of a thin layer of gold or silver leaf on each, and a gold finger-ring with a ruby set in it, there was found nothing of importance; but from one of the side relic chambers I recovered a stone votive *stūpa* with the gilding still adhering to some parts of it. It has two detachable parts: (1) a circular pedestal, and (2) the dome and finial above. The pedestal and part of the dome are hollow inside. In the cavity within the pedestal there was found *a small double relic casket* (Plate XCIX, *e*). The outer one is made of silver and the inner of gold. The latter contained a tiny object, probably of lime-stone, wrapped up in a small piece of muslin.[1]

There are many more 'enveloped' *stūpas*, varying in size from a few feet to very large sizes; none of these monuments at Pagan can be dated earlier than the 11th century A.D. The date of the building of the inner *stūpa* and of its outer envelope cannot be far removed in time; for they were built of the same type of brick, and the relics found in both belonged to almost the same age. It may be surmized that the inner *stūpa* served as a sort of relic casket, and the outer covering was added to it immediately after its completion.

Minor Finds from Other Sites.

The remaining sites examined consisted of Buddhist temples and *stūpas* in ruin, or mounds marking their sites. The structures themselves do not deserve special mention, but the following few finds are worth reporting:

[1] More likely to be a bone relic.—*Editor.*

I.—From a Relic Chamber on the ground floor of the Kubyauk Temple (also known as Bo-Cho-Mi Pagoda), South of Thiyipyitsaya village. Thirteen stone images of the Buddha seated cross-legged in the earth-touching attitude on a pedestal; with the exception of two all bear an inscription in square Burmese characters along the top of the pedestal, giving the name of the donor, Dhamma-Vilāsa, who was a monk and who styled himself a *mahāthera* (Plate C, *e*). On palæographical grounds the inscriptions belong to about the 13th-14th century A.D.

II.—From a mound marking the site of a ruined temple (No. 441) near the Seinnyet-Nyi-Ama-Pagodas. A small plaster image of an *arhat* seated cross-legged in the earth-touching attitude on a pedestal and placed in a miniature temple. An elephant carved in low relief is standing at the back of the temple, and two seated relievo figures of *arhats* are on each side of the temple. Probably *Upagupta*, a patriarch of the Northern Buddhists and a most popular Buddhist saint in Burma. The elephant at the back of the temple refers probably to an incident in his life while he was sojourning in Pāṭaliputra.

According to a Burmese account, King Aśoka, in order to test his magic power, let once loose an elephant. Through his *ṛiddhi* Upagupta came to know of the king's intention, and turned the elephant into stone. It was restored to life when the king explained to him everything and asked for his pardon[1].

Found among the *débris* of a ruined temple (No. 441) which fell down during the last earthquake.

III.—Mounds to the south of the Tawyagyaung Monastery, Thiyipyitsaya. I dug at five places here. They were situated close to one another in the same compound, and consisted of a cylindrical *stūpa*, a *stūpa* encased in another with a square basement in the form of a temple, a temple in ruin, and two mounds of brick. Nothing of note was recovered from the *stūpas*. A fragment of a small stone sculpture in relief with the upper portion missing was found among the *débris* inside a relic chamber beneath the main pedestal on the ground floor of the temple. It contains in the centre an image of the Buddha seated cross-legged in the earth-touching attitude on a lotus throne. Flanking him are two Bodhisattvas, both seated in the *lalita-mudrā* with the right leg pendant. Below the throne of the Buddha there are ten seated figures, nine of which in the *namaskāra-mudrā*. The figure on the extreme right has a shaven head and is seated cross-legged in the *bhūmisparśa-mudrā*. (Plate C, *a*).

It may be assigned on stylistic grounds to the 11th-12th century A.D., and is a distinct proof of Mahāyānistic influence.

IV.—Mounds close to the east of the Taw-ya-gyaung Monastery, Thiyipyitsaya. Three mounds close to the east of the Taw-ya-gyaung monastery and situated on an eminence overlooking it were examined. One marks the site of a monastery and the other two those of temples.

[1] *Jinatthapakāsanī-Kyam*, p. 703. For a more complete note on Upagupta see *Annual Report of the Superintendent, Archæological Survey, Burma*, for the year ending 31st March 1923, pp. 23-25.

At the north-east corner of the monastery site and close to the foundations of a wall, there were found two bull-heart shaped vases of burnt clay containing mercury (Plate C, *f*). Each vase, about 5½″ in height, was glazed and strongly made. Mercury was extensively used by alchemists in Burma, and it is quite probable that the inmates of that monastery have practised alchemy, as is not seldom the case even nowadays.

V.—Mounds to the north of the Taw-ya-gyaung Monastery, Thiyipyitsaya. Sixteen sites were selected here for excavation. Two of them were those of an encased *stūpa* and a cylindrical one with an arched dome, which have been already referred to.

The following objects were recovered from the remaining sites, on which temples once stood:

1. A bronze image of the Buddha seated cross-legged on a low pedestal. The right knee and part of the pedestal below is missing. Total height nearly 3½″.

2. A bronze image of the Buddha seated cross-legged in the earth-touching attitude on a lotus seat placed on a throne with a back, a portion of which is missing. The lotus seat is marked by a *vajra*. At each corner of the pedestal below there may be noticed two seated figures in front, representing devotees in the *namaskāra-mudrā*. The head of one of them is *missing. Total height:* 5¼″.

3. A small figure of a crowned and four-handed Gaṇeśa in baked clay. It is seated cross-legged on a pedestal with a back. The two upper hands are raised, the right holding a ring or a *chakra*, and the left a club. The figure of a mongoose is carved in relief on the front side of the pedestal. Total height: 2″.

4. A small sculptured stone slab illustrating the eight principal scenes from the life of the Buddha. The central figure, the Buddha, is seated cross-legged in the *bhūmisparśa-mudrā* on a lotus seat under the shade of the Bodhi-tree. (Plate C, *d*). Total height: 3¼″.

5. Another slab of stone sculpture of the same type as above (No. 4) but larger in size. It measures 6½″ in height, and contains additional scenes, the number of scenes being fourteen instead of eight as ordinarily represented (Plate C, *c*). In style and the arrangement of figures round the central one it resembles very closely the sculpture shown as fig. 1 in Plate III of the *Annual Report of the Superintendent, Archæological Survey, Burma,* for the year ending 31st March 1923.

The outer panels including the one above represent the scenes usually met with; they are, beginning with the lowest panel on the right of the central figure and going round clockwise, (1) The Nativity scene, (2) Buddha's first sermon, (3) Taming of the elephant, (4) Descent from heaven, (5) Miracle at Śrāvastī, (6) Presentation of honey by the monkey, and (7) Nirvāṇa. The last scene is placed on the top of the slab. Going round in the same order the first panel in the inner row represents (8) the feeding of the Buddha, (9) the Buddha in *dhyāna-mudrā*, (10) a standing figure with both hands raised in the *abhaya-mudrā*, (11) the figure corresponding to the last on the other side is also standing, but a good portion of it has broken away, (12) another figure of the Buddha in the *dhyāna-mudrā*, (13) another seated figure in the same attitude, with the hood of a serpent above the head,—probably the *Muchalinda* incident.

6. A small but very fine bronze image of a Bodhisattva seated in the *lalita-mudrā* on a lotus seat. The hair is done into a high *mukuṭa*, but without a crown. A sash is seen round the body, and the lower garment is a pair of close-fitting trousers. The right hand is raised in the *abhaya-mudrā*, and the left is resting on a lotus. (Plate C, *b*). The total height of the figure is 3¾″.

7. A small bronze image of a seated Buddha. Height: nearly 2½".

8. A plaster lotus throne with the lower portion of the seated figure on it still remaining. It is nearly 3′ 6″ in breadth and 1′ 6″ in height. Left *in situ*.

9. A small seated figure with a "pot-belly", height: 2⅜".

Wall Paintings in the Abéyadana Temple.

It is well known that the form of Buddhism now prevailing in Burma is Hīnayāna, with the Pāli Piṭakas as its canonical books. In the wall paintings in the *Abéyadana* and the *Kubyaukkyi Temples* near Pagan discovered during 1930-31, especially in the earlier ones (*c.* 11th century A.D. onwards) one meets with numerous traces of Mahāyānism. The first important study of these elements was made by Mons. Chas. DUROISELLE in his note on *The Art of Burma and Tantric Buddhism*,[1] drawing for purposes of illustration on the materials supplied by the wall paintings of the Payathonzu and Nandmañña Temples at Minnanthu. Since then there have been recovered from the excavations at Old Prome, Halin and Pagan some more materials as additional proofs of Mahāyānism in Burma, in the shape of statues, stone sculptures and terra-cotta votive tablets. These scarce data on Mahāyāna elements, as well as on Burmese painting, are most fortunately enriched by the discovery of a more complete series of Mahāyānistic figures among the wall paintings of the Abéyadana Temple near Myinpagan, Pagan.

The Abéyadana Temple consists of a sanctum with an arched corridor running around it. The only entrance to the sanctum is on the north. It communicates with a *maṇḍapa*, or porch, on that side. Tradition assignes the building of that temple to the later part of the 11th century A.D. It was called Abéyadana after the name of its founder, a queen of King Kyanzittha (1084-1112 A.D.).

In a band around the inner face of the outer walls of the corridor, and placed at a height of about 7′ above the floor level, there may be noticed, in *panels simulating mountain caves, many figures of Mahāyānistic gods and goddesses*, both in their peaceful and fierce forms, as well as images of *Bodhisattvas*. The latter were arranged in three rows, one above the other. The images in the lowest row are invariably seated in the *ardhaparyaṅka* attitude each wearing a high *mukuṭa*, a crown, ear-rings and other Bodhisattva ornaments, and in some cases felt boots (Plate CI, *a*).[2] They are non-tāntric in form; each have one face and two arms, and the attributes they carry in their hands are lances, clubs, *chakras*, daggers in various shapes, *vajras*, swords and books.

The images in the middle row are seated in the *lalita-mudrā* on double lotuses with the right leg pendant and the foot resting on a lotus the stem of which is attached to the seat. They are also in non-tāntric form with two arms and a face. The right hand is resting on the right knee with the palm

[1] *Archæological Survey of India, Annual Report*, 1915-16, pp. 79-93.

[2] Owing to the faintness of these paintings, sketches have been prepared instead of photographs for reproduction.

outward in the charity *mudrā;* the left is brought to the breast in the *abhaya-mudrā.* A lotus springing from the seat below is seen above the left shoulder. A book is sometimes placed on the lotus as an additional attribute. Each image is flanked by two other gods both seated sideways on their folded legs. The latter are facing the central figure and are in the *namaskāra-mudrā* (Plate CI, *b*).

In the upper row, the images are standing on lotuses with their left hands raised and holding a ring. The other hand is brought to the breast and is holding either a spear, a *khaḍga*, or a double trident (Plate CII, *a*).

They are all devoid of any legend and, in the absence of local tradition, it is difficult to identify them. If, however, we judge by the attributes in their hands, they may be identified with *Vajrapāṇi, Padmapāṇi, Avalokiteśvara* and *Mañjuśrī*, though it is quite possible that all of them represent Avalokiteśvara in his various forms.

A most interesting feature is disclosed by the paintings around the band already referred to. Unfortunately, the figures here are faint and some have flaked off; this, coupled with the fact of their being placed at a height not easily accessible, has contributed to their remaining unnoticed until now.

Beginning with the figures on the left from the entrance and going round the corridor clockwise, one notices, at the end of a large patch where the plaster has flaked off, a *Buddha* seated cross-legged in the *dhyāna-mudrā* with both shoulders covered; next, passing over another patch of fallen plaster, a *monk* is seen seated sideways with *an emaciated seated figure* in front whose hands are in the *namaskāra-mudrā.* The panel next to it holds the figure of *an ascetic* with the hair in two horn-like knots on his head. In front of him is a *deva*, offering him something in a vase. Then follow *a monk, an ascetic*, a *Buddha* and *another ascetic.* The last one is reclining on a couch with his eyes fixed on a *deva* above. At the foot of the couch there is a monkey standing and in the act of shampooing the ascetic. A mixture of such figures continues until one comes to the fifth panel on the east wall, where one notices a goddess, *probably Tārā*, seated on a lotus with the right leg bent and the left pendant. Her hands are in the *dharmachakra-mudrā*, and a lotus is seen above her right shoulder. She wears the ornaments of a Bodhisattva (Plate CII, *b*). The panel next to it holds *a Bodhisattva* seated on a lotus with the right knee raised. The right arm is resting on the right knee and the hand is raised in the *vitarka-mudrā;* the left hand is resting on the seat. He is followed by another *goddess with six arms.* She is seated cross-legged on a lotus. She wears a crown and other Bodhisattva ornaments. Her hands are in different *mudrās* but do not appear to be holding any attributes[1] (Plate CII, *c*). Then there follow again *monks, Buddhas, ascetics* and *a goddess.* The goddess is seated on a lotus. Her right hand is placed on the right knee and is in the *varada-mudrā.* The left hand is raised to the breast and is in the *abhaya-mudrā.* An *utpala* with its stem rising from the seat below is seen above her left shoulder.

[1] Probably again a *Tārā*, who protects against six-fold dangers.—*Editor.*

It is possible that some of the panels mentioned so far represent scenes from the *Jātakas;* but for want of legends and on account of their being isolated scenes picked out from the stories, it is difficult to identify them. However, among the panels that follow there are a series belonging to a *Jātaka,* the relevant panels coming one after the other almost in succession. They illustrate scenes from the *Mahā-Ummagga Jātaka.*[1] According to this tale, a hermit, Vachcha by name, was living in a hut in the Himālayas. Near by there were living many *kinnarīs*[2] in a cave, at the entrance to which there was also living a monstrous spider. This spider was living on the blood of those *kinnarīs.* He cracked their heads and sucked the blood out of them. Being weak and timid they could do nothing against him. So they went to the hermit and asked him to kill the spider and save them. But the taking of life was against Vachchas principles, and the ascetic refused their request. Next they came again bringing with them a young *kinnarī* finely arrayed, and presented her to the hermit. When the latter saw her, he fell in love, kept her with him and killed the spider. So he lived with her, and sons and daughters were born unto them.

This story is illustrated in five panels, three of which are shown in Plate CII, *d,* and Plate CIII, *a* and *b.* Plate CII, *d* shows the *kinnarīs* in a cave. In fig. *a,* Plate CIII the hermit is seen with the young *kinnarī.* The former is in the act of killing the spider with a club. In fig. *b,* Plate CIII the hermit is shown with his wife and children.

There are certainly clearer evidences of Tāntrism in the paintings along the same band; they display Mahāyānist gods and goddesses in their fierce forms or holding attributes of a Tāntric nature.

Along the south wall of the corridor, there may be noticed a *goddess holding snakes* as her attributes in both hands. She is seated with her right leg pendant. A devotee with hands in the *namaskāra-mudrā* may be seen seated on one side (Plate CIII, *c*). Another figure, here *a god, with a terrific expression* showing a row of fangs is depicted next to her. His ornaments, wristlets and bangles, are snakes, and his necklace is a garland of human heads (Plate CIII, *d*). A *god holding a human skin* across his back, and *another standing on a corpse* follow in succession, while *a goddess with six arms* carrying attributes of a Tāntric character, such as a ring, a *khaḍga,* a bow, an arrow, a head, and a sword with a garland of heads round her neck may be also discerned besides other gods and goddesses belonging to the same order.

At the north end of the west wall there are figures of Gaṇeśa and the Boar Avatāra of Vishṇu. Elsewhere in the same temple, on a wall of the sanctum, Brahmā, Śiva and Vishṇu are represented, each on his own mount. Brahmā is riding on a goose (Plate CIV, *c*), Śiva on a bull (Plate CIV, *b* and *d*) and Vishṇu on a *Garuḍa* (Plate CIV, *a*). The conception and execution of these figures is Indian, no doubt, but in every line and movement a local element is clearly discernible.

[1] No. 546 of V. FAUSBÖLL's *Jātaka,* Vol. VI, p. 422. See also COWELL's *Translation of the Jātakas,* Vol. VI, p. 217.

[2] The *kinnarīs* are legendary beings of feminine sex (the males are *kinnaras*), with the upper body of women, the lower portion being that of a bird.—*Editor.*

One other interesting feature of the temple is that while the mural paintings so far mentioned are Mahāyāna and Brāhmaṇa in nature, the panels in the porch outside are Hīnayāna. They illustrate scenes from the Pāli *Jātakas*. A legend in Pāli and Talaing explaining the scene represented is noticeable almost in every case whenever the paintings themselves are still traceable. A number is also attached to each with the number of the *nipāta* given after each series. The arrangement of the *Jātakas* follows very closely that given in FAUSBÖLL'S *Jātakas*, and it is remarkable that the same is met with in many other temples at Pagan.

Mural Paintings in the Kubyaukkyi Temple, Myinpagan.

Thus, in the Abéyadana, there may be noticed traces of influence from three sources: Hīnayānism, Mahāyānism and Brāhmaṇism. The same traces are met with in the paintings of the *Kubyaukkyi temple, Myinpagan*, which, according to two lithic records, was built by a son of King Kyanzittha. Here portions of walls below the frieze are ornamented with figures of Brahmā, and many-armed Bodhisattvas with their *śaktis* are guarding the entrances to the Temple and sanctum; while scenes taken from the *Jātakas* and the life of the Buddha as given in the Pāli books decorate the walls inside round the porch and corridor.[1] Hīnayānism and Mahāyānism were found together at Pagan for many centuries beginning with the historic period, *i.e.*, the 11th century A.D. The populace scarcely made any distinction between the two, and both forms were tolerated at the same time and place. Brāhmaṇism was also accepted to some extent, and the Buddhists actually worshipped some of the Brāhmaṇic gods. In the midst of a group of Buddhist temples and close to the east of the old Palace site at Pagan there is a Vishṇu temple belonging at the latest to the 12th-13th century A.D. It is known as Nat-hlaung-kyaung, *i.e.*, a temple where (Hindu) gods were kept. Tradition assigns it to the 10th century A.D., and the very fact of its being built amidst Buddhist temples and at the head of the Palace site, and also its existence up to the present day is an ample proof of the great tolerance shown by the Buddhists.[2] Gaṇeśa was a most popular god, and his images are often dug up at Buddhist sites among Buddhist objects.[3]

[1] A description of one of the panels is given *suprá*, pp. 45f., and a painting in colours is reproduced in the *Frontispiece*. —*Editor*.

[2] The worship of Nārāyaṇa took a great part in the ceremonies attending the construction of Kyanzittha's palace at Pagan. (*Epigraphia Birmanica*, Vol. III, Part I).

[3] According to a tradition, the Shwesandaw pagoda, a Buddhist *stūpa* at Pagan, the foundation of which was ascribed to King Anoratha (1044-1077 A.D.), was originally known as Mahā-Beinnè, a Burmese epithet of Gaṇeśa.

To the above footnote of the author I would like to add that the same mingling of religions took place in Bengal and Bihar ever since the 7th century A.D. There are numerous instances of Brāhmaṇistic gods being worshipped at Bodh-Gayā, Nālandā and Paharpur. A comparison with the Khmer country, with Sumatra and Java will again show that Buddhism in its two forms was freely accepting elements of Brāhmaṇistic worship.—*Editor.*

The Editor requested the Superintendent, Archæological Survey, Burma Circle, to furnish details of the technical execution of, and the materials employed for, these paintings. The following are extracts from a letter received from U MYA:

"As far as I have been able to ascertain, the 'fresco' in its true sense is totally unknown in Burma, and such a term cannot possibly be applied to the mural paintings of the Abéyadana and Kubyaukkyi temples. The paintings were executed on a plaster surface which had been probably allowed to dry. The colours used were few; they were mainly black, white, yellow, red, blue and green. The latter two colours are rare. For adhesive purpose gum obtained from *nīm* trees was used, but it is said that for black colour for that purpose gall of a certain kind of fish was much

Excavations at Pagan: 1931-32.

With very much reduced grants excavation during 1931-32 had to be confined to Pagan only where I have carried out diggings on a very modest scale.

Pagan, as far as it is known, was the first seat of the Burmese kingdom, which suddenly bloomed into existence and became a prominent country in the East in the 11th century A.D. One of the main objects I have in view in confining my attention to Pagan is to discover more tangible traces, if any, of Burmese settlement there before the 11th century A.D. The Burmese claim their descent from the *Pyu*, a nation which we know was once inhabiting the middle and a part of the upper basin of the Irrawaddy, and which might be credited with a civilization going back to at least the 4th-5th century A.D. The Pyu had their capital at Old Prome (*Śrīkshetra*). On the dissolution of their empire they shifted their capital to a site in the neighbourhood of Pagan. This, according to the native chroniclers, took place in the 2nd century A.D., and it was only about that time that the name Burmese was first heard of. In the light of present discoveries it is clear that the Burmese are quite distinct from the Pyu, and that the former people are unknown before the 11th century A.D. At the same time, *Môn influence* rather than Pyu in the moulding of Burmese civilization is becoming more and more evident. There is evidence for the presence of both the Pyu and the Môn at Pagan, the Burmese capital, at the beginning of the history of that city, probably as subject people; and if we may be allowed to conjecture, the *Shans* who, about the end of the 13th century A.D., overpowered the Burmese must also have lived in Pagan about the same time.

The digging operations there during the year under report were carried out at twenty-three sites at *Myinpagan*, in the neighbourhood of those excavated last year. They consisted mainly of old mounds of *débris*, and *stūpas* and temples in ruin, and were situated mostly close to the south of Myinpagan village and on the east side of the road from Myinpagan to Thiyipyitsaya. One of the first mounds examined was situated in a field to the *south-east of a monastery known as U Kywet Monastery* at the south end of Myinpagan. It measured about 7 feet in height above the surrounding level with a length of about 6 feet east—west and 28 feet north—south at the base. On clearing the *débris* on and around it, it disclosed the remains of *a small temple*, rectangular in plan,

preferable. It was mixed with lamp-black to obtain the necessary colour and adhesive quality. That is to say, the pigments were mixed with water and a binding substance and used; and accordingly, the work can in no sense be called frescoes, but tempera paintings [*al secco.—Editor*].

The black outline of my drawings is found often in the originals. Sometimes, it is red. Whatever it is, it is firm and bold, and often the line drawn round the oval face of a figure or a curve would make it appear that it had been done with one stroke.

With the materials I possess I have tried to see that the facsimiles I sent correspond to the originals as far as possible. The one in colours (*i.e.* the Frontispiece) may look a little too fresh, but it has been made *as perfect a copy as it could be.* (The total height of the painting from the Kubyaukkyi is 3 feet, and it is found close to the roof above the corridor). However, I would not claim it in the case of the drawings from the Abéyadana. Those I have sent are not in colours and have not been done to scale. They are free-hand drawings showing the mere outline of the figures, and my aim has been to give a general impression of their expressions and other details. Tracings could have been prepared if the originals were clear enough and could be seen through, but they are very faint, and the help of a strong light was not found to be of any service for the purpose".

consisting of a sanctum preceded by a porch. The sanctum measured internally 18'×15', and the porch nearly 18'×7'. The lower part of *a seated Buddha in brick and plaster* placed on a pedestal, also of brick and plaster, which measured nearly 11 feet in breadth and 5 feet in height, was found placed against the back wall of the sanctum (Plate CV, *a*). Traces of a hole made by treasure-hunters were also found close to the base on the east side of the pedestal. From among the *débris* with which the hole was filled up we recovered votive tablets in burnt clay, some being in a fair state of preservation and others in fragments, a small head of a monk in black marble, a headless figure of a "pot-bellied" saint in burnt clay, and a stone *āmalaka* in the shape of a cone measuring about 5 inches in diameter at the base. The last probably belonged to the temple itself before it fell down.

The votive tablets are roughly semi-elliptical in shape, and may be divided into two classes, one bearing representations of the eight principal scenes from the Buddha's life, and the other, ten effigies of seated Buddhas. The former are duplicates of those found at a small ruined *stūpa* near the Mangalazedi pagoda, Pagan, and mentioned in page 169 of the *Annual Report* for 1926-27; but some among the present lot are in a better state of preservation, and the scenes represented on them in relief and the *nāgarī* legend below are much clearer. (Plate CV, *d*). The legend, which begins, as in the other instance, with *ye dhammā hetu pabhavā*, and ends with *dānapati Śrī Mah*[*ī*]*śyādevī* in the second line, is in bold raised letters resembling very closely the type of letters used in one of King Anoratha's tablets.[1]

The ten seated Buddhas in the other class of votive tablets are arranged in three rows. Below the lowest row there is a one-line legend of raised letters in a mixture of Môn and Pāli, in Burmese characters of the 11th-12th century A.D. The first half is in Môn meaning, "This tablet was made by Yasa", and the other half is in Pāli, and means "with his own hands". (Plate CV, *c*). Some of them contain a second legend in Môn on the underside of the lower rim, written probably with an iron style. It mentions that that tablet was made by a *Samben* (a minister).

The Site near the Ôktama Pagoda, Pagan.

The site near the Ôktama Pagoda was marked by a mound of *débris.* It measured nearly 60 feet east—west and 70 feet north—south at the base with a central height of about 6½ feet and an easier gradient on the north side.

The digging was begun by sinking a shaft, about 6 feet square on the top, and cutting trenches, each about 6 feet wide, on four sides of the mound round the base. In the shaft, and at a depth of about 2 feet from the top surface of the mound, small fragments of terra-cotta haircurls belonging to a Buddha image were recovered. At a depth of 3½ feet a cement floor was struck. It was found to be bounded by walls rising above it on four sides, the wall on the west side having an opening in it near the centre. A brick pedestal is placed against the east wall.

[1] Cp. here Plate XCIX, *d*.

The opening in the wall on the west side led to another walled space, and it was eventually discovered that the first enclosure with the pedestal in it formed the *sanctum* and the other a *small porch* of a temple raised on a low platform measuring nearly 45′×28′. Close to it on the north side there were found traces of another brick building, probably a *stūpa*, with a basement nearly 17′ square.

Traces of *relic chambers* were also discovered, one below the pedestal in the sanctum of the temple, and the other in the foundations of the remains of the *stūpa;* but they were devoid of any object of interest, the principal finds made consisting of a few terra-cotta *votive tablets* bearing effigies of the Buddha and belonging to about the 12th-13th century A.D.

The following are among the other objects recovered from the same site:

(1) A fragment of the upper portion of a stone votive *stūpa*. Such a *stūpa* generally formed the principal object enshrined in a relic chamber, but the one mentioned was found outside among the *débris* on the north side of the mound.

(2) A fragment of a stone *āmalaka*, about 1 foot in diameter at the base and 9 inches in height.

(3) A broken earthenware pot.

(4) An image of a seated Buddha in burnt clay. Height: $1\frac{7}{8}$″.

(5) A pot-bellied saint in stone. Height: 3″.

(6) Fragments of a votive *stūpa* in ivory.

The Kyazin Temple, Myinpagan.

Myinpagan is redolent with traditions regarding King Anoratha (1044-1077) and his successful fight in single combat with Sôkkade (1038-1044), his half-brother and predecessor. The Myinkaba pagoda on a side of the stream skirting Myinpagan is known to have been built by Anoratha to expiate the crime in killing Sôkkade, and the *Kyazin Temple*, which is situated now in a field on the other side of Myinpagan, is also *attributed to King Anoratha* and is known to have marked the spot where Sôkkade fell from his horse. It was here, at Myinpagan, that Manuha, the last king of Thaton, was kept a captive by Anoratha.

During the year 1931-32 I made a careful examination of the Kyazin Temple. It has two storeys each with a square basement. The lower basement is preceded by a porch on the east face and is provided with a door opening on each of the three remaining faces. The porch is also provided with door openings, one on each side in addition to the main entrance. The upper storey is resting on two square receding terraces, and was originally crowned by a *śikhara* of a type which is very common at Pagan. (Plate CVI, *a*). The sanctum below enshrines *a large image of the Buddha in brick and plaster*. He is seated cross-legged in the earth-touching attitude on a brick pedestal, and is flanked by two other figures, smaller in size, seated in European fashion.

with the hands raised to the breast in the preaching attitude. In the chamber of the upper storey there was found a high *circular pedestal with traces of four seated figures* probably Buddhas, on it.

The whole temple appears, from its style, to be *later than Anoratha's time*, and the flat terraces above are features common to a type of temples known to have been built after King Kyanzittha's time (1084-1112). This is corroborated to a certain extent by an epigraphical evidence—a writing in ink—found on a wall inside the porch of the same temple. According to it, the original founder of that temple was a man named Bāruchī, and he died in the year 1125 A.D., but the temple was completed only many years after. The enshrining of the relics took place in 1217 A.D., and the building was completed in 1223 A.D., that is, nearly a century after the death of the founder. Some of the *terra-cotta votive tablets* recovered from the *relic chamber* underneath the pedestal in the sanctum of the lower basement bear, however, *the marks and seal of Anoratha.* They were found mixed with other tablets belonging to a later age. One type of them has an effigy of the Buddha seated cross-legged in the earth-touching attitude on a lotus in an arched niche crowned by a *hti.* (Plate CVI, *b*). Small *stūpas* of an archaic type may be noticed flanking it, and below the lotus seat there is the Buddhist formula *ye dhammā hetu pabhavā etc.* in *nāgarī* characters of the 11th-12th century A.D. From the style of the principal figure and the *stūpas* flanking it, and also from the type of letters in the *nāgarī* legend it may be assigned to Anoratha's period, *i.e.* 1044-1077 A.D. The second type of terra-cotta votive tablets found in the same relic chamber leaves no doubt as to its age (Plate CVI, *c*). Here the central figure, the Buddha, is seated cross-legged in the earth-touching attitude on a lotus placed on a pedestal in what would appear to be a temple of the Bodh-Gayā type. He is flanked by two Bodhisattvas, both seated in the *lalita-mudrā* on double lotuses; above their heads are two other seated figures of Buddhas and small *stūpas.* Below there is a Sanskrit legend in two lines in *nāgarī* characters of the 11th-12th century, which reads as follows:

(1) *Oṁ. Deyadharmo'yaṁ sachchadānapatiḥ Ma-*
(2) *hārāja Śrī Aniruddhadevasya.*

"*Oṁ*! This is the pious gift of the Dispenser of Truth, the great and illustrious King Aniruddhadeva."

"Aniruddhadeva" is, as has been noticed often, the title of Anoratha (1044-1077).

These tablets were found together, as already noted above, with other terra-cotta votive tablets of a different type belonging to a later age. The latter were only sunbaked, and owing to the hardness of the soil in which they had been embedded none of them could be taken out in a good state of preservation. As far as it could be made out from what remained of them, each contained representations of the eight principal scenes from the life of the Buddha, in a style belonging to the 12th-13th century A.D.

Structural, epigraphical and sculptural evidence go to show that the temple in question, as it now stands, belongs to an age later than Anoratha's time.

The presence of Anoratha's tablets in the relic chamber may prove that that monument was built over the remains of an older temple.

Two other sites in the same compound as the Kyazin were also examined. One was marked by a low mound of *débris* close to the north, and the other by a small round *stūpa* in ruin close to the south-east of the Kyazin. The mound on the north disclosed after digging the remains of a building with three small rectangular chambers placed in a row, running north—south and facing east. They were paved with stone flags. There were traces of a pedestal in the middle chamber, but the two others were empty. The pedestal in the middle chamber had been dug into for treasure, and the relic chamber was found empty except for pieces of mica, which were probably intended for making images of the Buddha or other holy personages. The building probably was a temple and a *vihāra* combined. The two side chambers were rooms for monks residing on the premises, and the central one was a chapel.

The round *stūpa* on the south-east was probably dome-shaped. For want of epigraphical and other evidence its age could not be determined with any degree of certainty, and all the finds made in it consisted of a terra-cotta votive tablet of Pyu origin, a small crystal bead, and a headless figure of a saint with a pot-belly. On the strength of the first and the last named finds the building may be assigned to the 12th-13th century A.D.

Remains of a Temple in Myinpagan Village.

The next site examined was situated in the village itself, on the south side of the eastern quarter. It was marked by a circular mound of *débris* which was nearly 7 feet in height above the surrounding level and 60 feet in diameter at the base.

The digging was started by cutting a trench about 6 foot wide across the centre of the mound, running east—west. At a depth of 1 foot below the surface near the centre traces of two brick walls were met with first. They are running parallel to one another in the same direction as the trench with a space of 3′ 9″ between. They are only 2′ 9″ in length, and turn outwards at right angles at both ends. Following them up and widening the trench as the work proceeded, the space between those two walls was found to form a *connecting passage between two chambers*, one being on the east and the other on the west. They measure nearly 11 feet square and 8 feet square respectively. The chamber on the east contained a *brick pedestal* with traces of *a seated Buddha* on it. The other chamber shew traces of a *brick staircase* on one side in the thickness of the wall, a feature which is common to many temples at Pagan. There was evidently a second storey above.

Further clearance of *débris* inside the chambers and round the base brought to light the following objects:

(1) Two stone images of the Buddha (head broken in both cases) each seated cross-legged in the earth-touching attitude on a lotus (Plate CVII, *a*). Height including the seat: nearly 3 feet each. One of them was found in the west chamber and the other near the base of the mound on the east side. Both of them belong to about the 11th-12th century A.D.

(2) A round lump of plain lead, about $1\frac{3}{4}''$ in diameter.

(3) A small votive *stūpa* in stone. Height 1′ 10″. There are some traces of painting on it (Plate CVII, *b*). It is made in two parts and they were found detached outside the relic chamber in the east room, the relic chamber itself being found empty.

(4) Eight small stone bricks.

Temple S. E. of the Nagayon, Myinpagan.

A few hundred yards to the south-east of the Nagayon temple, a small mound yielded some interesting finds. This proved to be *a small temple* consisting of a square basement surmounted by a *stūpa*, facing east. The square basement contained a *seated Buddha* in brick and plaster, and a narrow corridor originally ran round it. The objects found here consisted of the following:

(1) A small lotus seat made of plaster.

(2) A small head of the Buddha made of plaster.

(3) A small figure of a "pot-bellied" saint made of plaster. Height: nearly 3½″.

(4) Terra-cotta votive tablets each bearing an effigy of the Buddha seated in the earth-touching attitude on a throne in a highly ornate temple (Plate CVII, *c*). Below the throne is a much defaced *nāgarī* legend in two lines. On the reverse face of some of them there are hand-written inscriptions in Pāli in Burmese characters of the 11th-12th century A.D. The text is in two varieties, but the letters are of the same type. One says that the image of the Buddha (Jina) was made by an *ācharīya*, a monk, while the other contains a prayer expressing a hope that his work of merit might be a help to obtain omniscience. (Plate CVII, *d* and *e*.)

(5) Two inscribed stone slabs measuring 3′ 5″×1′ 1½″ and 3′ 5″×1′ 9½″. They are in Burmese and record the dedication of lands, slaves and cattle to some temples and *stūpas*.

One is dated both in the year of the religion and the Burmese Common era, equivalent to 1081 A.D. The style of its letters, however, date from the 12th-13th century A.D., and it is therefore probably a copy. The original, if there was one, would belong to the time of King Sawlu (1077-1084 A.D.). It makes a mention of ten Shan (spelt *Hyan*) slaves dedicated to a pagoda. There were evidently Shans at Pagan from the beginning of her historical period, *i.e.*, the 11th century A.D., at the same time with the Pyu and the Môn. About the end of the 13th century A.D., the Pyu were lost sight of, the Môn receded towards the South, but the Shans overpowered the Burmese, and Pagan as a Burmese capital began to exist only in name.

The second slab was inscribed on both sides and records the dedication of slaves and lands, *etc.*, to a temple and four *stūpas* on two different occasions, there being an interval of a few months only between. It is dated in the year 482 of the Burmese common era (1120-21 A.D.), but curiously enough, each side is complete in itself and begins with the name of the month, day of the month and the week in which the occasion took place, and the year mentioned above appears to have been added only after some time had elapsed. The last was found on the top of the reverse face of the stone outside the text and the letters are in a script belonging to a later date.

However, there can be no doubt about the archaic character of the inscription. It is quite consistent with the date mentioned in it, and for purposes of Burmese philology it is a rare and important document.

Both these stones were found inside the temple, and they incidentally fix the period, *i.e.*, towards the first half of the 12th century A.D., during which the temple and some of the others in the neighbourhood might have been built.

A few hundred feet to the east there were found traces of *a small temple* facing west from which was recovered *a figure of a Bodhisattva* seated in the *lalita-mudrā* on a pedestal. It is in plaster and was found in a damaged condition (Plate CVIII, *a*).

Other Ruins near the Nagayon.

A view of some of the sites in the neighbourhood of those just mentioned may be seen in Plate CVIII, *b*. They are situated about 500 feet to the south-east of the Nagayon temple. The mound with a slightly concave top on the extreme left was found after digging to form the remains of a temple originally enshrining in a sanctum, measuring nearly 20 feet square, *images of four Buddhas.* The walls around it were ornamented with niches which also contained images of Buddhas of which only traces are now visible. The sanctum was preceded by a porch and an entrance.

The *stūpa* in the middle of Plate CVIII, *b* (with a flat top and a cactus tree growing on it) has its *bricks marked with Pyu letters*, a feature which was common to those at Hmawza (Old Prome). It was built on a high plinth raised on a platform paved with stone flags. Around its base were found a few earthenware pots containing ashes. Pot-burial was a practice prevailing among the Pyu.

A miniature model of the *stūpa* on the extreme right of the same photograph may be seen in a stone votive *stūpa* (Plate CVIII, *c*) found within its relic chamber. The latter consisted of a circular pedestal and a bell-shaped dome surmounted by receding circular mouldings, representing umbrellas, and an *āmalaka*. It formed no doubt a relic casket, but its contents had been removed. In the same chamber there were also found two *terra-cotta votive tablets*, each bearing an effigy of the Buddha flanked by two Bodhisattvas (Plate CVIII, *d*). They resemble closely the terra-cotta votive tablet belonging to Anoratha and shown in Plate CVI, *c*. Anoratha's tablet, however, has a legend in Sanskrit in *nāgarī* characters, while the present tablet has one in *Pāli* in Burmese characters. The latter may be read as:

eso[1] *bhagavā Trilokavataṁsakā Mahādeviyā kato vimuttatthaṁ sahatthen'evāti.*

"This tablet was made by Trilokavataṁsakā, the Chief Queen, with her own hands, with a view to attain Salvation." It is a pattern inscription often employed by Anoratha and many others of his time and after, the only variation being in the names of donors. There were four queens bearing a name closely resembling the above. They were the queens of (1) Sawlu (1077-1084), (2) Kyanzittha (1084-1112), (3) Alaungsithu (1112-1167), and (4) Narapatisithu (1173-1210); but it is difficult to say whose queen made the above tablet. On the strength of the resemblance of it to Anoratha's tablets and the more archaic type of letters in the legend, it is likely that she was the wife of King Sawlu or Kyanzittha. The proximity of the find-spot to the Nagayon, one of Kyanzittha's temples, might induce one to decide that she was a queen of Kyanzittha.

Three other sites, two being in the neighbourhood of the one just mentioned above and the other close to the north of the Nagayon temple were also examined. Besides traces of walls which formed the remains of monasteries or temples nothing of interest was discovered from them. Mention, however, may be made of two earthenware vessels found in what looked like a relic chamber at one of the two mounds just referred to. They were found surrounded and covered by small

[1] The letter *e* looks like a symbol for *Oṁ*.

terra-cotta votive tablets, each bearing an effigy of a Buddha seated in a temple. The Buddha is flanked by many small *stūpas*. Below there is the *ye dhammā* formula in *nāgarī* characters of the 11th-12th century A.D. Inside one of the vessels were found small pieces of ivory which fell into powder on taking out. The other vessel contained a small *bronze image of a seated Buddha* flanked by two disciples (Plate CV, *b*). The Buddha has a sort of conical cap in the way of an *ushṇīsha*, and the two disciples are seated with their hands raised in the *namaskāra-mudrā*. The vessel containing it had two covers, the inner one being in bronze and the outer in burnt clay.

Exploration during 1932-33:

Wall-paintings in the Patothamya and Nat-hlaung-kyaung Temples, Pagan.

During 1932-33 I examined more carefully some of the wall-paintings in the Patothamya and Nat-hlaung-kyaung temples at Pagan. These paintings are not easy to reach as they are situated in dark corners and close to the roofs.

The paintings in the Patothamya illustrate as usual, in large panels, *scenes from the Buddha's life*. They have become much blurred owing to the ravages of time, weather and insects, but enough remains to show that these paintings were the work of no mean artist. As in the case of those in the temples of King Kyanzittha's time (11th-12th century A.D.) the lines are more uniform and firm, the perspective is more correct, and there is a greater precision in the proportions of each figure than in the case of later period paintings. The male royal personages are invariably represented with large cloaks covering the whole body, on which are shown patterns of geometrical design.

The *Patothamya* is included in the list of temples said to have been built by King Taungthugyi or Nyaung-u Sawrahan (931-964 A.D.) on the model of those that were then existing at Thaton and Old Prome. This is only a tradition, and it is not yet possible to confirm that date. From the style of the paintings and the legend below each scene the temple itself cannot be assigned to a date later than the 11th century A.D. The legends are in Old Môn in an archaic type of characters, and for purposes of illustration line copies[1] of two of the panels are shown in Plate CIX. Fig. *a* represents the Foretelling of the Boddhisattva Siddhārtha by the Ṛishi Kāla Devala. The Bodhisattva, the King his father,—with a cloak covering nearly his whole body,—the queens and the old *ṛishi* may be easily identified. The figure, at the right corner, somewhat defaced, probably represents the old *ṛishi's* nephew Nālaka, who afterwards took up, at his uncle's advice, the life of a *śramaṇa*. The building in which these figures are seated is very likely fashioned after the palace buildings of the period found in Pagan, and is consequently of historical interest.

Fig. *b* shows Buddha in the midst of his kinsmen. He is exhibiting the *yamaka pāṭihāriya* to curb the pride of his kinsmen. Here again the Sakyas, Buddha's kinsmen, are seen clad in cloaks with geometrical patterns covering the whole body.[2]

[1] For the quality and reliability of these outline copies *cf.* the footnote No. 3 on pp. 184-185.—*Editor.*

[2] It will be seen that the artist tried to represent the facial characteristics of Indians. The eyes are cut in the Indian fashion, so are the lips and nostrils.—*Editor.*

A later period painting is found on a jamb of the doorway to the sanctum. This painting represents, among others, a king. He is wearing a cloak, but his head-dress is a conical one in the form of a cap with a long-pointed stem (Plate CXI, *e*). Below, there is a legend in Burmese in square characters of a type belonging to about the 14th century A.D. It reads *Maṅ Lu[la]ṅ koṅ mhu, i.e.:* "The meritorious work of Maṅ Lulaṅ". Above it and a little to the right there is again another short legend in the same script meaning "The Buddha Gotama". Maṅ Lulaṅ is a name of King Sawlu, and of King Saw Hnit. The latter was a titular king of Pagan, and reigned from 1299 to 1335 A.D.

A few hundred feet away from it on the east is situated *the Nat-hlaung-kyaung,* the only Hindu temple now extant at Pagan. Tradition assigns it, as in the case of the Patothamya, to the same king Taungthugyi, but the *Pagan Paya Samaing* says that it was built during the time of King Anoratha.[1] There are wall-paintings in this temple which must be contemporaneous with the building and the sculptures, and which have never been noticed before. They have become mostly obliterated; a few, the outlines of which may roughly be traced, are situated high up on the walls close to the roof and difficult to reach. The temple is essentially a Vishṇu temple, and all the paintings represent seated figures of Vishṇu with his devotees. In some the attributes may be distinguished, and they are the *chakra,* conch, lotus (?), club or sword. Some of the Vishṇu images have four hands, others two, and the distinguishing marks are discernible only in the case of images with four hands. The devotees are, in almost every case, ascetics wearing beards and moustaches, with the hair on the head done up into two knots, one on each side above the ear. Each ascetic is seated with the legs folded on one side and the hands raised in the *namaskāra-mudrā* towards the fire before him in a salver.

The temple is situated in the midst of Buddhist temples, some of which may be contemporaneous with it, and close to the south-east corner of the old palace site. It is quite possible that it was built by one of the kings of Pagan of the 11th-12th century A.D. In this connexion, a passage in the *Hmannan Mahārājavaṁ* ("Glass Palace Chronicle"), in a portion relating to King Kyanzittha (1084-1112 A.D.), is worthy of note. It says: "In the year 426 (?) Htihlaingshin Kyānzittha became king. When he had become king he built a palace and dwelt there x x x. When he ascended the throne he worshipped the spirits".[2]

All the Hindu gods are called spirits by the present day Buddhists in Burma, and the above passage may be interpreted in this light.

A large *stone image of Siva,* which has now been preserved in the Museum, was originally found within that temple.

Old Caves near Myinzaing, Kyaukse District.

On the overthrow of the Pagan dynasty near the close of the 13th century A.D., the seat of the Burmese kingdom was shifted towards the north, and three Shan brothers Asaṅkhayā, Rājasaṅkran and Sīhasū, were ruling; the eldest,

[1] For a note on it, as it now stands, and the images enshrined in it and the niches round the wall outside, a reference may be made to the *Archæological Survey of India, Annual Report, 1912-13,* pp. 136-139.

[2] *The Glass Palace Chronicle,* p. 105.

Asaṅkhayā, at Myinzaing, Rājasaṅkran at Metkhaya, and the youngest, Sīhasū, at Pinle, all in the Kyaukse District. They were brought up in the Burmese Court at Pagan, and each was assigned a governorship at the places just mentioned. But at the instigation of the old Dowager Queen Pwa Saw they killed the last king of Pagan and set up a puppet king in his place, while they themselves assumed an independent rôle. With the change of the seat of the kingdom the arts and crafts of Pagan were brought over to the Kyaukse District, and with it a new era began there under the patronage of these Shan brothers. Temples, *stūpas* and monasteries were built, caves were dug, and accounts of their construction and the dedication of lands and slaves to them were recorded on stone slabs as in the case of those at Pagan. Among all the records on stone that have so far been discovered in the Kyaukse District as well as elsewhere in Burma belonging to this period there is none in the Shan language. The civilization then seemed to be purely one of the fallen dynasty, that is, Burmese, and it was brought over bodily from Pagan.

At the east end of the small range of hills known as *Shwethalyaung hills*, Kyaukse, there were found in the course of the year under report, *remains of old caves* dug along the sides of those hills. They were discovered by a Buddhist monk of Kyaukse while he was clearing the jungle around his forest retreat during the last *varsha*. They are rectangular chambers sometimes connected by passages. But certain importance may be attached to them from a historical point of view; for they form a connecting link between those of Pagan and the more recent ones at Sagaing, Ava, Amarapura, and Mandalay.

The hills are of sand-stone formation, and in some of the caves dug into them remains of *colossal images of the Buddha* in different attitudes carved *in situ* out of the same formation can still be noticed. The caves were covered with brick-work on the outer face, and traces of radiating arches built in the same style as those at Pagan may still be discerned over some of the entrances. Their approximate age may be determined from a Burmese inscription on a marble slab, found in one of the caves and dated in the Burmese common era 666 *sakkarāj* (1304-05 A.D.). It states that that cave was dug during the time of *Saṅghyā, Rājā* and *Sinkasu*,[1] the three Shan brothers alluded to above.

Besides the colossal images of the Buddha in stone, small wooden images of the same personage were found in some of the caves. They are interesting as examples of Burmese art during the Shan supremacy in the 14th century A.D. and after (Plate CX, *a* and *b*).

Finds made by a Villager at Pagan.

In the course of one of his visits to Pagan during the year 1932-33, the Superintendent had the opportunity of examining the finds made by a villager at Pagan. The finds consisted of many small bronze images of the Buddha and other objects. They were found among the *débris* of a ruined shrine, which was situated in the Pyezu quarter, Pagan. A representative selection of them is shown in Plate CX, *c* and *d*, and Plate CXI, *a*, *b*, *c* and *d*. Plate CX, *c*, represents the Buddha

[1] These are the actual names found in the inscription for Asaṅkhayā, Rājasaṅkran and Sīhasū.

seated in regal dress (Jambupati), and fig. *d* in the same Plate shows the Buddha in the Parileyyaka forest with an elephant as his sole companion. The elephant may be seen at the foot of the Buddha on his right. On his left may be noticed the figure of a monkey. The latter is seated and is offering a bee-hive to the Buddha. Below, in front of the raised seat on which the Buddha is standing, is a short legend in Burmese in a script belonging to about the 16th-17th century A.D. It refers to the Parileyyaka by mentioning the "Pa[la]lai Elephant King". In Plate CXI, *a* is a seated bronze image of the Buddha. A peculiarity of this figure is that it is found to possess an extra thumb in the left hand which is placed on the lap, a feature which I have never met so far in any other image of the Buddha. Buddha is preaching in *b*, and figs. *c* and *d* are those of *arhats*. Fig. *c* is in stone and *d* in bronze. The latter contains a short legend in Burmese at the back, which gives a date in the Burmese common era equivalent to 1602 A.D.

Exploration during 1933-34: Preservation of Antiquities.

Owing to the very thorough cut in the grant for Exploration (Rs. 500 were sanctioned for this year!), the Superintendent had to suspend all excavation work. The above amount was spent on the preservation of excavated antiquities at Amarapura, Hmawza and Pagan.

Inscriptions from Thaton.

During the year 1932-33 I procured through the kindness of Mr G. H. LUCE, M.A., I.E.S., Reader in Far Eastern History of the Rangoon University, a few estampages of the old *inscriptions in the Shwezayan pagoda, Thaton.* Damaged as they were, the archaic style of their letters attracted my attention, and I visited Thaton during the year 1933-34 in order to obtain clearer estampages and to find ways and means by which those stones could be preserved. Some of them were first noticed by Mr R. F. St. Andrew ST. JOHN of the Burma Commission in 1867. Writing for the *British Burma Gazetteer* published in 1867, Mr ST. JOHN says, "Near this pagoda (Shwezayan) are some large stones carved with writing but so worn as to be unreadable: the letters, however, appear to be Talaing".[1] Mr Taw Sein Ko saw them when he visited Thaton in 1891. He says, "They are five Talaing inscriptions at Thaton: four in the enclosure of the Shwezayan Pagoda, and the remaining one under a banyan tree at Nyaungwaing. Their palæography indicates that their age is about 400 years".[2]

I found *seven inscribed stone slabs* within the enclosure of the Shwezayan pagoda. The *earliest* of them may on stylistic grounds be assigned *to the 11th-12th century* A.D., and the *latest to the 15th century* A.D., but they are very much effaced, and so far it has not yet been possible to make a connected sense of any of the earlier ones. They are in Pāli and Môn (Talaing). Three of them were found to have been set up in a row, the writing partly buried in the ground, under the eaves of a small *tazaung* on the east side of the main shrine. Of these,

[1] *British Burma Gazetteer*, Vol. II, p. 717. For every reference to Mr R. F. St. Andrew ST. JOHN's notes in the *British Burma Gazetteer*, Vol. II, in this and the following pages a reference may be made also to the article under the heading *Thatone or Thaton, the Cradle of Buddhism in Burma*, contributed by the same author to the *Phœnix*, Vol. II, pp. 204-206.

[2] *The Indian Antiquary*, Vol. XXI, p. 380.

one, nearly six feet in height, bears faint traces of a standing image, probably of the Dīpaṅkara Buddha, followed by a monk. There may still be noticed a few lines of writing on that slab above the head of that monk, but they are faint and cannot be read, except for a few letters which belong to about the 11th-12th century A.D. (Plate CXII, *a*).

The second stone in the same row is 5′ 3″ in height, and contains many lines of writing, but here also the letters are very faint and a large patch of the surface containing a portion of the writing has disappeared. Within the triangular top on the inscribed face are three images of seated Buddhas on lotus seats (Plate CXII, *b*). Judging by the style of the letters, they also belong to about the 11th-12th century A.D. The third stone is completely obliterated.

The fourth stone was found on the north side of the same *tazaung* close to a bell. It is also much damaged, but can be ascribed similarly to about the 11th-12th century A.D.

The fifth stone, which may be placed in the same class as the above, was found in a dustheap close to the north enclosure wall. It is a fragment and the letters on it are also very much worn.

The sixth stone was found set up close to another *tazaung*. It belongs to about the 15th century A.D., and was probably set up during the time of *Dhammacheti*, king of Pegu (Haṁsāvatī) (1472-1492). It records the building of shrines over thirty-three tooth-relics of the Buddha. The stone is very much damaged.

The seventh is a small fragment with letters much worn. It was found in the same pagoda compound.

These stones are no doubt much damaged; but, with patience, it may be possible to decipher portions of them. I approached the Trustees of the Shwezayan pagoda and they agreed to take great care of them in future. The stones will be removed from their present sites and re-housed in one of the *tazaungs*.

The Terra-cotta Plaques of the Thagya paya *at Thaton.*

I took the opportunity of my visit to Thaton to examine the Thagya *paya* (*Sakra* pagoda) or Myatheindan pagoda, which is situated just to the east of the Shwezayan in the same compound, and the terra-cotta plaques adorning the walls around one of its terraces. Their original nature or religious character has been a matter of controversy for many years, and opinion is divided as to whether the bas-reliefs represented on the latter are Buddhistic or Brāhmaṇistic.

The Thagya *paya* is a Buddhist *stūpa* of the conical type resting on three tiers of receding terraces, each terrace resting on a raised platform roughly square in plan (Plate CXII, *c*).

Projecting from the centre of each of the walls below the two upper terraces and facing the cardinal points there are deep and high niches covered over with arches. Each of these niches now enshrines a standing image of the Buddha. Besides these high niches, there are smaller ones sunk in the dado below the second terrace. These smaller niches, not including the half side-niches, measure on an average nearly 2′ 4″ square with a depth of about 9″ each. The

side-niches measure 1′ 3″×2′ 4″ each. Originally there were embedded in them red terra-cotta plaques with bas-reliefs.

Many of the plaques are now missing, and those now *in situ* are either broken or damaged, and have been so much covered with a thick coat of white-wash as to make the figures on them almost invisible. As far as records are available on the subject, they were first noticed by Mr R. F. St. Andrew St. John in 1867,[1] and by several other scholars after him, including Mr Taw Sein Ko, Sir Richard C. Temple and Mr F. O. Oertel.

Quite recently a careful study of their style and character, as far as it could have been done in their present very bad state of preservation, was made by Mr Nihar Ranjan Ray of the Calcutta University.[2] Apparently there were originally 64 niches in all. There are only five plaques left on the west, 3 on the north, and 7 on the south face, altogether thus 15. Mr St. Andrew St. John has guessed perhaps rightly with regard to a few of them, and both he and Sir Richard Temple thought that they illustrated the *Jātakas*. Mr Taw Sein Ko was of the opinion that the people "who constructed those tablets undoubtedly professed Brahmanism or Hinduism", and that "Śiva with his trident is the predominant figure".[3] Mr Nihar Ranjan Ray seems to be almost certain "that they tell no Buddhist legend but one frankly of Brahmanical lore or Pauranic mythology".[4]

Going round the terrace, the first plaque at the north-west corner or of the west wall shows the outline of a well-proportioned figure of an elephant. A few human figures are mounted on it, and behind it there are two other human figures rather scantily dressed and in an excited mood (Plate CXIII, *b*). As a correct identification of that plaque may give us a clue to the identification of the rest, I may quote here what Mr St. Andrew St. John saw, though the plaques were then probably devoid of the present thick coat of whitewash. He says, "(1)—Four hideous and bearded individuals, riding closely packed on the back of an elephant, are pelted with stones by two youths on foot behind with their waistcloths tucked up. One of the figures on the elephant has his hair done in a knot on the forehead like a Shan or Kareng; but the youths behind have a large knot at the back,—a fashion not now known anywhere in Burma or eastwards (though usual in Orissa)".[5] Further, in an unpublished note of his, recorded below a rough sketch of that plaque, he says, "No. 1—Thaton. Terracotta plaque 1′ 11¾″×1′ 10¾″. It is very clear that this represents the Uposatha elephant being taken away by the Brahmans in Vessantara Jataka". The text of that episode in the *Vessantara Jātaka* runs as follows: "The city of Jetuttara all did tremble. The Brahmins, we are told, at the southern gate received the elephant, mounted upon his back, and amidst thronging multitude passed through

[1] *British Burma Gazetteer*, Vol. II, pp. 716-717.
[2] *Brahmanical Gods in Burma*, Calcutta University (1932), pp. 54-57.
[3] *The Indian Antiquary*, Vol. XXI, p. 381.
[4] *Brahmanical Gods in Burma*, pp. 54-55.
[5] *British Burma Gazetteer*, Vol. II, p. 716.

I found it important to give plenty of illustrations to this interesting article of U Mya; unfortunately, the photographs do not show any detail, thanks to the quantity of whitewash with which the relievoes are smothered. I have, therefore, slightly retouched the photographs, faithfully keeping to the original.—*Editor.*

the midst of the city. The crowd, beholding them, cried out, 'O Brahmins, mounted upon our elephant, why are ye taking our elephant?' The Brahmins replied, 'The great king Vessantara has given the elephant to us: who are you?', and so with contumelious gesture to the crowd, through the city they passed and out by the northern gate by aid of the deities. The people of the city, angry with the Bodhisat, uttered loud reproaches".[1] If the scene represented in the first plaque is really from the *Vessantara Jātaka*, we may then expect to find close to it other scenes taken from the same story, or from the *Vidhura Jātaka* which often is found next to it. Unfortunately the next plaque is missing. We may examine, however, the others on the same wall, as far as they now remain; and for convenient reference we may number the niches consecutively beginning with the one under discussion at the north-west corner and going round the terrace anti-clockwise as shown in the sketch map (Plate CXIII, *a*).[2]

No. 2 is missing. No. 3 is *in situ*, and we notice on it three figures in a row. The figure on the left wears a crown and is riding on a horse. He has something like a dagger in his right hand while he is probably holding the reins in the other. On the right is a figure also wearing a crown. He holds something in his right hand, but it is not distinct. He is probably seated with his legs bent a little and spread out and the feet hanging down. He is being addressed by a third person in the middle, who is standing and is probably catching hold of him by the hand. Below are wavy lines (Plate CXIII, *c*).

Neither Mr St. John nor any other who had examined it could give us an explanation of this plaque. We may proceed further and examine the other plaques to see if we may find a clue to it.

No. 4 is a side-piece, but it has nothing to do with the story we are in quest of and we may leave it for the present. No. 5 has disappeared.

No. 6 is *in situ*, and as it is separated from No. 3 only by two plaques we may find a clue in it.

This plaque is divided horizontally into two panels. There are two seated figures in the upper panel. The figure on the right is surrounded with umbrellas and is seated in an easy posture with the left knee raised slightly and the right laid flat. The head is missing. The figure on the left is seated in a respectful attitude in oriental fashion with the legs folded. It is facing the other figure. The hair is gathered together in a large knot at the back, and there are traces of a halo round the head. Mr St. John thinks that there is something like a box in front of that figure. Below is a horse without a rider "tied to a post" with in front a round disc in the shape of a lotus and a kneeling figure behind (Plate CXIV, *a*).

Among the collection of (unpublished) photographs of terra-cotta plaques illustrating the *Jātakas* from Pagan I found a plaque from the Petleik pagoda showing a horse and a disc, the former repeated twice, with other human figures. The legend above in old Burmese or Môn characters of the 11th century A.D.

[1] *The Jātaka* (English translation), Vol. VI, p. 254.
[2] The Editor regrets that he had to curtail U Mya's article considerably. Much of the argumentation has been eliminated, as it was felt that U Mya anyhow proves his case.—*Editor.*

reads, *Vidhura Jāt* || *549* (Plate CXIV, *b*). The story is briefly as follows: Varuṇa, the Nāga king, the Supaṇṇa king, Sakka, the king of *devas*, and Dhanañjaya, the Koravya king, were one day seated round a tank in the latter's garden discussing the paramount virtue of each. To settle the dispute as to who was the most virtuous, they asked a wise man, named Vidhurapaṇḍita, belonging to the court of the Koravya king. He decided that they were all equal, and that decision pleased them very much. Among the rewards the wise man received on that occasion there was a jewel given him by the Nāga king. The queen noticing the absence of the jewel asked the Nāga king where it was. He said that he had given it to Vidhura as a reward for his wise moral discourse. The queen desiring to hear Vidhura discourse the Law pretended that she wanted to have Vidhura's heart and feigned to be ill. The king, to save her life, asked his daughter Irandatī to look for a husband who could bring Vidhura to his court. Irandatī then went forth in the night to the Himālayas, and adorning the entire mountain like a precious jewel she danced and sang longing for a husband. At that moment the Yakkha Puṇṇaka happened to come riding that way on his magic horse. Being fascinated by her song he approached her and promised that he would be her husband. She then seizing him by the hand took him to her father.

Puṇṇaka asked the king for her as his wife and said that he would give him much wealth in exchange but the king desired that he should bring the sage Vidhura to his court. That being agreed upon Puṇṇaka set out and took with him the wonderful jewel besides the magic horse he was riding on. Dhanañjaya, the Koravya king, was addicted to dice throwing, and Puṇṇaka planned to gain Vidhura at a game of dice with Dhanañjaya. Disguising himself as a young man of surpassing beauty Puṇṇaka challenged the king for a game of dice and laid as his wager his magic horse and wonderful jewel. In the game that followed Puṇṇaka won, and he chose Vidhura as his prize.[1]

Now the plaque from the Petleik and the story alluded to above have perhaps solved the puzzle of our plaques Nos. 3 and 6. The "equestrian figure" wearing a crown on the left in No. 3 represents Puṇṇaka. The other figure on the right is the same Puṇṇaka, but dismounted and seated probably on a crag of the hills represented by wavy lines below. Irandatī, the middle figure is seizing him by the hand and is taking him to her father. The disc and horse in No. 6 represent his wonderful jewel and magic horse with an attendant behind. Above, the figure on the left is Puṇṇaka. He is at a game of dice with the king seated on the right. The box which Mr St. John thinks he saw in front of Puṇṇaka is perhaps a dice-box.[2]

If the above identification is right then it may be taken for granted that No. 1 certainly illustrates a scene from the *Vessantara*. Now following either the traditional order or that found in the Ananda, Pagan, we should expect to find a scene or scenes from the *Mūgapakkha Jātaka* on the other side of the *Vessantara* round the corner. Here the first relief, No. 16, contains many figures. On

[1] *The Jātaka* (English translation), Vol. VI, pp. 126 ff.
[2] *British Burma Gazetteer*, Vol. II, p. 716, No. (4).

the left is a prince or a royal personage seated probably on a throne. Below is a salver standing on a leg and holding food or flowers (?), and an attendant is kneeling on one side. On the right is another royal personage carried on a seat on the shoulders of men; he has a high head-dress and is seated under an umbrella with (traces of) streamers and flags in the background. (Plate CXIV, *c*).

Mr St. John, in a short and unpublished note of his says, "12—A queen brought on a litter to a king. Probably Amara". Mr St. John is very probably right in his identification. It may very well represent a scene from the *Mahā-Ummagga Jātaka* in which Amarā plays an important part.

Mahosadha, in the disguise of a tailor, left the city in search of a wife. He found his match in Amarā, brought her and left her in the gate-keeper's house. Then he sent his men to Amarā to test her chastity and had her brought before him by force. Amarā, not knowing who he was as he had now cast off his tailor's dress and was in his princely mansion, gave him a mild rebuke for his uncharitable character and unseemly treatment of a wedded woman. Knowing her chastity he had her taken back to the gate-keeper's house. "Next morning he repaired to the palace and told Queen Udumbarā all about it; she informed the king, and adorning Amarā with all kinds of ornaments, and seated her in a great chariot, and with great honour brought her to the Great Being's house, and made a gala day. The king sent the Bodhisat a gift worth a thousand pieces of money: all the people of the town sent gifts from the door-keepers onwards".[1]

The figure seated on the left represents Mahosadha in his house receiving presents from the king and the people. Amarā on the right is being brought to be wedded to him in the right royal style.

Three niches (Nos. 17, 18 and 19) next to No. 16 along the same wall are empty. and the fifth (No. 20) holds a broken plaque. It is divided horizontally into two panels. In the upper panel a man is standing with a longish thing like a tail coming out of his back from below his arm-pits. Below, in the lower panel, are four seated figures. The one on the extreme left probably wears a crown. The remaining three figures, all *nāga*-headed, are in the attitude of addressing in a respectful manner the first figure. Here again the credit of the first identification of the story may be given to Mr St. John. He says, "11—Alampaya with the serpent in garden. Below the Nāga king with three Nāga princesses". The Alampaya of Mr St. John is no doubt the Ālambāyana, snake-charmer, of the *Bhūridatta Jātaka*. The Ālambāyana was in the presence of the king of Benares and was making a show of Bhūridatta, the Bodhisatta snake. There were also present Sudassana, Bhūridatta's brother, in the guise of an ascetic, and his sister Achchimukhī, who in the form of a small frog was accompanying Sudassana in their search for Bhūridatta. In the contest that followed between the Ālambāyana and the ascetic as to who was the better snake-charmer, the Ālambāyana lost as a result of which the Bodhisatta had to be set free.[2] In the lower panel, Bhūridatta, Sudassana and

[1] See also *Epigraphia Birmanica*, Vol. II, Part II, Plate XXVII. fig. 161.

[2] For the story of Bhūridatta, see *The Jātaka* (English translation), Vol. VI, pp. 80 ff. It is illustrated with 21 plaques on the Ananda. One plaque is missing. (*Epigraphia Birmanica*, Vol. II, Part II, Plates LII-LVI.)

Achchimukhī are revealing themselves to the king as beings belonging to the Nāga-world, and are explaining to him that they are his nephews and niece (Plate CXIV, *d*).

Nos. 21 to 24 are missing. No. 25 which still remains is much damaged and broken. All that can be made out is the figure of a prince seated on a throne under a foliated arch. On one side are seated many figures which have become much blurred and cannot be properly identified.

No. 26, next to the above, is *in situ*, but it is not easy to identify it either. It represents a prince or a royal personage seated on his throne under an arch with an attendant standing on either side "with the usual hair-knot and short tucked-up waist-cloth". It is, as in the case of others, in a damaged state and covered over with a thick coat of lime (Plate CXV, *a*). It is not impossible that this plaque represents the scene of the *Bhūridatta Jātaka* in which the *nāga* prince Bhūridatta takes a hunter and his son to the *nāga*-world. When they desire to return, there is a long argument between the king and the mortal hunter and his son; and probably this incident is shown in this plaque.

No. 27 is only a small fragment and cannot be identified. Nos. 28 and 29 are missing. No. 30 is also a fragment; the left lower corner has broken away. It is divided into two panels. There are four figures in the upper panel, two on the left being seated, the third near the middle in a crouching position, and the fourth on the right also seated. The last one is kneeling with the hands joined together and raised to the breast. Below the crouching figure there is another one in the same attitude, but the latter's head is turned in an opposite direction (Plate CXV, *b*).

The plaque next to the above on the same wall (No. 31) is in a fairly good state of preservation, and as it is quite close to the other, both may be examined together. Mr St. John describes the second plaque as follows: "(6)—In the upper part are a man and woman, well-dressed, riding on a four-wheeled cart drawn by ponies. The shape of the cart is curious. Below is a potter's shop, showing a man turning the wheel whilst one forms the pot and another, behind, kneads a lump of clay. Pots stand on the shelves. All the figures have enormous knots of hair at the back of the head".[1] (Plate CXV, *c*).

It would be impossible for me to check all these details in the present state of the plaque. In a short and unpublished note of his he describes the same as, "Upper half king in carriage and potter working below (Mahosadha)".

Mahosadha was falsely accused of the theft of Crown property, at the instigation of four nobles who were very jealous of him. He incurred the royal anger and fled, and he took up his residence in disguise in a potter's house. While he was away, those nobles tried to seduce Amarā, his wife. She then set up a trap for them; they fell into it, and were duped into the privy. Dressed as four white monkeys they were presented to the king the next morning. At the same time, Amarā tried to establish the innocence of Mahosadha, the real culprits being those four nobles. The king, however, remained unsettled for a certain time so far as Mahosadha was concerned until at last he was forced by the deity dwelling

[1] *British Burma Gazetteer*, Vol. II, p. 716.

in the royal parasol to recall him. Then he sent out "four of his courtiers, with orders to mount each in a chariot, and to go forth from the four gates of the city, and wheresoever they should find his son, the wise Mahosadha, to shew him all honour and speedily to bring him back".[1] Three of them did not find the sage, but the fourth who went out by the south gate found him in a potter's house and brought him to the king.

Now both Nos. 30 and 31 may be explained in the light of the above story and identified as follows: the four figures in the upper panel of No. 30 represent, beginning with the one on the left: Queen Udumbarā, King Brahmadatta, one of the nobles dressed up like a white monkey, and Amarā; below, one of the three remaining ministers also dressed up like a white monkey.

The second plaque (No. 31) is partly an antecedent and partly a continuation of the same story. Mahosadha is in the potter's house as shown in the lower panel. He was met there by one of the courtiers. Above, he is being driven back in a chariot and taken to the king.[2]

These two form the last plaques on the south wall, and all the niches on the east wall are empty. There remain only three plaques on the north wall, and they are Nos. 52, 55 and 57. No. 52 bears traces of a seated princely figure with an attendant behind and an indistinct figure below. It cannot be identified. No. 55 has a kind of scroll-work above. Below, on the left, is a figure standing Buddhawise with a high head-dress. His right hand is missing; his left arm is bent and the hand is raised to the shoulder. In front is a kneeling figure and a man in a chariot apparently turning away from him. From the mutilated condition of those figures it is not easy to identify the scene or scenes they represent. This plaque is just six niches away from the first niche on the west wall, round the north-west corner. The latter contains reliefs illustrating the *Vessantara Jātaka* already noticed above. Now as the order of *Jātakas* ends with the *Vessantara* and begins with the *Temiya*, it may be presumed that the plaque in question represents one of the scenes either from the *Vessantara* or the *Temiya Jātaka*. But I am inclined to think that it fits in better with a scene from the latter *Jātaka*. The king's charioteer brought prince Temiya in a chariot to the outskirts of a forest to be buried alive. While the former was digging a pit, the latter went up to him and asked him why he was doing it. The whole matter being explained, Temiya revealed himself. In the plaque under discussion the standing figure probably represents Temiya. He is speaking to the charioteer who is kneeling at his feet. The same charioteer, in another figure in the chariot, is carrying back the glad tidings to the queen, Temiya's mother.[3] The plaque was already much damaged when Mr St. John saw it. He says, "(5)—Is much mutilated and all that can be discerned is a woman kneeling before a standing prince whilst in front is a man on a four-wheeled cart drawn by a pony".[4] (Plate CXV, *d*.)

[1] *The Jātaka* (English translation), Vol. VI, p. 188.

[2] That part of the story is illustrated in three plaques on the Ananda (*Epigraphia Birmanica*, Vol. II, Part II, Plate XXXVIII, figs. 162, 163 and 164) but the part relating to the trap set up by Amarā is not shown there.

[3] The *Temiya Jātaka* is illustrated in 37 plaques on the Ananda. See *Epigraphia Birmanica*, Vol. II, Parts I-IX.

[4] *British Burma Gazetteer*, Vol. II, p. 716, (5).

No. 57 is only a fragment. Besides a few kneeling figures nothing now remain on it. It may be a scene either from the *Temiya* or *Vessantara Jātaka*, but it cannot be identified.

Niches Nos. 58, 59, 60 and 61 are all empty and the next round the corner is No. 1 with which we started our examination.

The age of these reliefs can be ascertained with a certain amount of accuracy. If we surmise that they are about a century earlier than those to be discussed in the next chapter, then they may be said to belong to the 11th-12th century A.D.

Pillars with scenes from the Mahānipāta Jātaka round the Kalyāṇī Sīmā, Thaton.

Close to the Thagya *paya* and just across the newly constructed road on the south outside the pagoda compound there is a new *Sīmā* (Budhist Ordination Hall) which was built on the remains of an old one. Around that *Sīmā* now known as *Kalyāṇī Sīmā* there may still be noticed many pillars in sand-stone with stories from the *Jātakas* carved in relief. Here, at a corner, is a scene from the *Mahājanaka Jātaka.* Mahā-Janaka is shipwrecked in the midst of an ocean, and the goddess Maṇimekhalā, poised in the air, is addressing him from above. Another pillar, although only a fragment, shows Suvaṇṇasāma leading his blind parents Dukūlaka and Pārikā of the *Sāma Jātaka* (Plate CXVI, *a*). King Nemi of the *Nemi Jātaka* is being shown round the hell, in another corner, in a chariot driven by Sakka's charioteer (Plate CXVI, *b*). Close to it, on a separate pillar, the wise and artful Amarā, Mahosadha's wife, is presenting to the king, during her husband's absence in a potter's house, the four nobles dressed up like white monkeys. (Plate CXVI, *e*).

The *Vidhurapaṇḍita Jātaka* is illustrated on two pillars. On one, which is a fragment, are represented the four kings seated round a tank, discussing the virtues of each (Plate CXVI, *c*). On another King Dhanañjaya is being challenged to a game of dice by the Yakkha Puṇṇaka. The former is seated on his throne under an arch, and the latter is standing before him in the guise of a young man (Plate CXVI, *f*).

A pillar found broken in two parts depicts scenes from the *Vessantara Jātaka.* It is divided into two panels. The upper panel shows Prince Vessantara giving away the white elephant. Part of the stone here has flaked off but there can be no mistake about the scene represented. There are four figures in the lower panel standing in a row. They wear their hair in large knots at the back of their heads and are scantily dressed with only a loin-cloth. They have long and pointed noses and are making certain gestures. Their arms are bent and stretched before them and the first on the right has them raised above his head. They perhaps represent the four Brāhmaṇas who had been unable to be present at the last great gift of the prince before he left for the Himālayas after his banishment from the country (Plate CXVI, *g*).

Another pillar, of which only the lower half remains, shows the trunk of a tree, and a figure, partly damaged, standing on one side in a menacing attitude. The latter has a bow in one hand, which is pointing upwards. This probably

represents another scene from the *Vessantara* according to which the prince with his wife and children was staying in the Himālayas. A forester was kept to watch the entrance to the woods. One day Jūjaka, an old Brāhmaṇa, who was in search for the prince, arrived at the spot, and it is stated that the forester's dogs met him there and drove him up a tree. Attracted by his loud cry the forester came to the tree, and suspecting that the Brāhmaṇa had come to ask either for Maddī or the children he drew his bow and threatened to shoot him (Plate CXVI, *d*). The dogs are not represented in the scene, and, as the upper portion of the pillar is missing, part of the tree and the Brāhmaṇa Jūjaka are not seen in this fragment.

These carved pillars may be ascribed with a considerable amount of certainty to the 12th-13th century A.D., as there is an inscribed pillar among them the palæography of which relegates it to that period.

A Bronze image of the Dīpaṅkara Buddha Thaton.

A bronze image of the Dīpaṅkara Buddha was found in the possession of U Ādichchavaṁsa, the presiding monk of the Saddhamma-Jotika monastery of Yanaung-taik, Thaton. According to him, it was found by some coolies at Thaton while digging a drain about twenty-five years ago. The Dīpaṅkara Buddha is shown with the right hand raised in the *abhaya-mudrā*, and the left hand holds a fringe of the robe (Plate CXII, *d*). The robe closely fits the body, but the hem of the drapery stands out in bold folds. The folds extending from the hands, halfway down the legs, are clearly and profusely marked on either side. The pleats round the waist are also discernible, but the drapery between the legs is indicated merely by incised lines. Both shoulders are covered, and the edge of the garment is shown there by a small fold below the neck.

The figure was damaged by the pickaxe and broken into three pieces. The head with a part of the shoulders and neck was severed from the trunk, and the right hand was broken. The nose and the mouth and a part of the forehead were chipped off, but enough remains to show some of the principal features of the face.

One outstanding feature of this figure is the material of which it is made. The framework in bronze is coated with a metallic substance of greenish colour or enamel which prevents corrosion. This is the second image of the kind that has been discovered in Burma, the other being a small image of the Buddha found at Hmauza (Old Prome) in 1926-27 among other objects belonging to about the 7th-8th century A.D.[1]

Finds at Yegyi-Yenauk, Bassein.

At Yegyi-Yenauk, a suburb of Bassein, there were a few mounds of *débris* lying in a part of the land now reserved as a grazing-ground. Two of the most prominent ones among them have been reclaimed by pious Buddhists living in

[1] *Archæological Survey of India, Annual Report*, 1926-27, p. 177, (15).

The date given above by Maung Mya will probably be right for the present image too. It shows a marked similarity to late Gupta images of India proper; indeed, if found in India no one could have ever guessed that it is a Burmese image.—*Editor.*

the neighbourhood and *stūpas* have been built over them. A third was being reclaimed in the same manner but in the surmise that there may be treasures hidden under the heap, the monks have excavated the site. It is very regrettable that such irresponsible diggings can still occur in this country.

As far as I could gather from the monk in charge, the digging was begun from the top, and the first object that was brought to light was a conically shaped object in brick embedded right in the centre of the mound and at a height of about 14 feet above the surrounding level. Lower down they found traces of lotus-petals and ringed finials forming part of a *stūpa*. At that stage they were obliged to cut a trench across the mound from the north side, and, as they dug lower down, the bell-shaped dome and the circular terraces below ornamented with lotus-petals were exposed (Plate CXVII, *a*). At the same time they discovered two small chambers, one on the north and the other on the south side of that *stūpa* and built in the brickwork forming an outer covering to the *stūpa*. On opening them up they found in them small terra-cotta votive tablets bearing effigies of the Buddha; votive stone *stūpas*; many figures of *arhats*, male and female; bronze images of the Buddha; a small porcelain vessel and other glazed earthen-ware ones containing what were believed to be corporeal relics of the Buddha or his disciples; small rubies in silver caskets; two stone figures of a male and a female devotee; and an inscribed slab of stone. The latter was found outside the south chamber. The language of the inscription is in mediæval Môn. It is dated 886 *sakkarat* (*sakkarāj*) which is equivalent to 1524 A.D., and commemorates the making of bronze and other images of the Buddha and relic caskets by three villages, which were probably in the Bassein District, but which cannot yet be properly identified. These images and caskets were probably the principal contents of those two chambers, and there can be no doubt that a *stūpa*, as an outer envelope to the one round which they were found, was probably added then. The former envelope belongs to the year 1524 and the core *stūpa* probably to an earlier date. The shapes of these two *stūpas* have perhaps been preserved roughly in the two votive *stūpas* found inside the relic chambers. One is octagonal in plan and is raised on a terrace with projecting planes. It is tall and slender in shape with an elongated finial and dome (Plate CXVII, *d*), and forms a contrast with the other which has round terraces and a squat dome and finial (Plate CXVII, *b*).

The terra-cotta votive tablets found with the other objects in the two relic chambers bear images of the Buddha seated in a shrine approximating in style the temple at Bodh-Gayā (Plate CXVII, *c*); these tablets must belong to an age earlier than the 16th century A.D. They may be assigned on stylistic grounds to the later part of the Pagan period, *i.e.*, the 12th-14th century A.D.

Among the other objects found in the same relic chambers the most important are the two small *figures of a male and a female devotee* already referred to (Plate CXVIII, *a*). They probably represent an official and his wife in their state dress. The official wears a high cap somewhat bulbous in shape narrowing at the centre. It has a lappet on either side, which is turned up. A long cloak which is probably open in front covers his whole body. He is seated

cross-legged and is in the attitude of worshipping. A string of beads passes round his left arm and is hanging from it. The lady is also seated in the same attitude, but she has her legs folded and doubled up in the way ladies usually sit. Her head-dress has a high and slender knob issuing from above the crown of the head and surmounted by two small round-shaped objects with a wedge between. The other part of her dress is a close-fitting jacket, an under-garment reaching above the breast, and a shawl falling on one side in front across her thighs (Plate CXVIII, *a*, left hand figure).

As examples of bronze and other images of the Buddha mentioned in the inscription, reference may be made to Plate CXVIII; here fig. *b* shows *two bronze images*, 6 inches in height, seated in the earth-touching attitude. They have a peculiar head-dress with a nail-shaped object issuing from a lotus bud raised above a low *ushṇīsha*. The legs are not crossed but the right is laid over the left. Fig. *c* is an image in stone. It is seated in the same attitude as figs. *b* but the nail-shaped object above the crown of the head has been reduced here to a lotus bud.

There were *over one hundred figures* of *arhats* found at the same site. It is possible that some of them represent male and others female *arhats*, but they are so much alike that it is not possible to distinguish them. Some of them are shown here as Plate CXVIII, *d*. Among them there are two small figures of seated *arhats*, one with a round object (something like a begging-bowl) placed against the breast with both hands laid on it, and the other with a protuberant belly with the hands pressing against it. The latter is seated Buddha-wise with the legs overlapping.

SECTION III.—EPIGRAPHY.

SUMMARY OF WORK IN 1930-31.

By Dr Hirananda Sastri.

Some very important Sanskrit inscriptions have come to light during the year 1930-31. The oldest of these are *two Minor Rock Edicts of Aśoka* discovered in the territory of His Exalted Highness the Nizam on the Gaurīmath and Pālkīguṇḍu Hills. These have been published by Dr TURNER in the *Hyderabad Archæological Series*, No. 10. Amongst the rest, those which require special mention are briefly noticed here.

Mathurā Inscriptions.

The earliest record in this lot is the Kushāna inscription which was found in *Mathurā* and has been deposited in the newly constructed Curzon Museum of Archæology there. It is dated in the 28th year and refers to the reign of *Huvishka*, the well-known Indo-Scythian or Kushāna king of Northern India.[1] It appears to be a Brāhmaṇical record and the prayer it contains, *viz.: yachatra puṇyaṃ ta[ṁ] Devaputrasya Shāhisya Huvishkasya teshāṁ=api puṇya[ṁ]bhavatu sarvāye cha prithiviye puṁ(pu)ṇya[ṁ*] bhavatu*, though similar in import, is different from what we meet with in the Buddhist records which usually give *yad=atra puṇyaṁ tad=bhavatu.....sarvva-sattvānāṁ=anuttara-jñān-*(or *sukh-*)*āvāptaye.* The inscription records a perpetual gift or endowment made for an almshouse (*puṇya-sālā*) by Va(Ba)kanapati with whom we have already met in another record of this period. From the interest of this endowment (*akshaya-nīvī dinnā ta(?)to vriddhito mās-ānumāsa[ṁ], etc.*), 100 Brāhmaṇas had to be fed every month and certain articles of food and drink had to be procured for being distributed to the hungry and thirsty people every day. The inscription ends with the mention of two perpetual gifts of 550 *Purāṇas* each made by two guilds (*śreṇis*) the name of one of which was Samitakara.

The next in date, though perhaps much more important historically, is the *stone-pillar inscription* of the reign of *Chandragupta II* which has also been lately secured for the above mentioned Museum. It is dated in the year 61, evidently of the Gupta era, and furnishes the earliest date so far known for the son and successor of Samudragupta the Great. I am told it was found at the Chandul Mandul *bagīchī* near the Raṅgeśvara-Mahādeva temple, which stands outside the Holi Gate of Mathurā. The pillar (4′ 2″ high) on which it is engraved is octagonal in shape but its base is square. Five of its faces are inscribed. The middle face, which must have stood at the front side, has a trident (*triśūla*) carved on the top, *i.e.*, above the inscribed portion, and a standing three-eyed male figure at the bottom. The feet of this figure are now missing. The staff (*lakuḍa* or *lakula*) held in the right hand (Plate CXX, *c*) suggests that it is the image of Lakulīśa and, if the identification is correct, this would be the earliest known

[1] Published in *Ep. Ind.*, Vol. XXI, Pt. II, by Dr Sten KONOW.

lithic representation of that divinity. The inscription is written in the Kushāna Brāhmī script and Sanskrit prose, though the last line of it scans like *Ārya*. The chief interest which this record possesses lies in the date which it contains, although a very important portion of it, giving the regnal year of the Gupta Emperor Chandragupta (II), has, unfortunately, peeled off. It is dated in the year of the victorious reign of the *Bhaṭṭāraka Mahārāja Rājādhirāja*, the illustrious Chandragupta, the 'good son' of the *Bhaṭṭāraka Mahārāja Rājādhirāja*, the illustrious Samudragupta, on the fifth day of the bright half of the first *Āshāḍha* of the year 61 of the Gupta era. The earliest date which was hitherto known for Chandragupta (II), was 82, as recorded in his Udayagiri Cave inscription. His latest date known so far is the Gupta year 93 which is given in the Sanchi stone inscription. Thus the document under notice at once carries the rule of Chandragupta II some 20 or 21 years before the earliest date so far known for him and would show that this powerful king had a fairly long reign of not less than 32 years. Had the portion giving his regnal year been preserved we would have been able to fix the year of his accession also. In calling Chandragupta the *sat-putra* of Samudragupta this inscription would remind us of the words *āryyō hi* with which Harishena makes Chandragupta (I) address his son Samudragupta while ordaining him as his successor, in the beautiful verse of his well-known *praśasti* which BÜHLER rightly considered to be 'one of the best productions of the ancient Indian poets'. It will not be unreasonable to infer from this epithet (*sat-putra*) that, as was the case with Samudragupta, 'the kinsmen of equal grade had to look up with sad faces' when Chandragupta (II) became king. The inscription under notice is a Brāhmaṇical (*Śaiva*) one and its object is to record the consecration of two *liṅgas* in a building called *Gurvvāyatana*, *i.e.*, 'the Teacher's Shrine'.

Another noteworthy inscription I examined during my stay at Mathurā is, incised on a long piece of stone which is now built into the outer dilapidated brick wall of a *dharmaśālā* in the Dasavatara street of the city. It is an incomplete record. Palæographically, we may ascribe it to the Gupta period. It seems to read: *ryasya Mitravarmma-putra-nagarakīyasya? yad=atra puṇyaṁ hoti pitusya kāl-ānuvartamāna-saṁvatsare saptate 70 Bhādrava(pa)da-divase saptaviṁśe 27.* Neither the object of the record nor the era, to which the date given herein belonged, can be ascertained from it.

Inscriptions from the Western Circle.

Five inscriptions were read for the Superintendent, Archæological Survey, Western Circle, and a note on them was supplied to him during this year. One of these inscriptions is in Sanskrit and the rest are in Kannaḍa. In date they range between the years 1121 and 1189 of the Christian era. Only one of them, which seems to have been found at the village of Saloṭgi in the Bijapur district of the Bombay Presidency, deserves special mention. It is dated in the Saka year 1043 and states that the mother of Govinda-daṇḍanātha, the governor of Tarddevāḍi, was the sister of Anantapāla, the minister of the Chāḷukya sovereign Vikramāditya VI.

Inscriptions from Rāṇibennūr.

Among the inscriptions of which copies were sent to me by outsiders for examination, two require special mention in this résumé. Both of them were found at Rāṇibennūr in the Dharwar District of the Bombay Presidency and are written in Kannaḍa. One of them is dated in the year 781 and the other in 1774 of the Śaka era. The former is an old record belonging to the time of the Rāshṭrakūṭa king *Amoghavarsha I.* It registers a grant of land to the Nāgula-*basadi*, or the Jaina temple founded by Nāgula Pollabbe (*i.e.*, Pollabbe of the Nāgula family), the gift being entrusted to Nāgānandy-āchārjya(yya) of the Siṁghavura-*gaṇa*. The other is a Nāgarī record and is dated in the Śaka year 1174 (1252 A.D.). It mentions one Jaitugideva who might be identified with the homonymous son of Siṅghana (*c.* 1200 to 1247 A.D.) if the record belongs to the Yādava dynasty.

Inscriptions in the Bombay Karnāṭak.

The portion of the Bāgevāḍi *tāluk* the survey of which was left over last year, was finished this year and the epigraphical survey which my Kanarese Epigraphical Assistant carried out there brought to light 38 new inscriptions all written in Kannaḍa. The earliest of these records belongs to the reign of the Western Chāḷukya king *Vikramāditya VI* whose son the *yuvarāja Mallikārjunadeva* it mentions as governing the Tarddevāḍi-1000 district in the Chāḷukya-Vikrama year 35, Nandana (1112 A.D.). There are so far only three inscriptions which mention this prince. One of them, noticed last year, also mentions him as administering the said division in the Chāḷukya-Vikrama year 20 (1095 A.D.). In the year under report we have succeeded in securing the only known inscription of *Hermāḍideva,* the father of the Kalachurya king Bijjala. It is an important discovery. The inscription is dated in Śaka 1051, Kīlaka, Kārttika, *pūrṇimā,* lunar eclipse (A.D. 1128, November 8, Thursday) and shows that when the *mahāmaṇḍaleśvara* Hermādideva of the Kalachurya dynasty was governing the Tarddavāḍi-*nāḍu* as a subordinate of the Chāḷukya king Bhūlokamalladeva (Someśvara II), *Nīlakaṇṭha Nāyaka* made a gift of land to the temple of Nīlakaṇṭheśvara. Another inscription copied this year belongs to the reign of Bijjala's son *Rāyamurāri Sovideva.* It tells us that Chandra, a scion of the Hiḷa family whose son Sovarasa built a *trikūṭa* temple of Somanāthadeva at Iṅgaleśvara, was the *niyoga* (minister) of Hermādirāya's queen Valvaṇidevī who was not known to us before. We further learn from this record that a grant of land which was made to the said temple at Iṅgaleśvara by the *Mahāpradhāna, Senādhipati,* Deva-Daṇḍanāyaka was entrusted to Jñānaśaktipaṇḍita, the *āchārya* of the Svayambhū-Keteśvara temple at Vijayapura (*i.e.*, the modern Bijapur). This Deva-daṇḍanāyaka was also unknown to us before.

Of the Yādava king *Siṅghaṇa* one record has been found at Yāḷvār. It mentions a *mahāpradhāna* of the king named Mallideva-Daṇḍanāyaka who is stated to have been administering the town Eḷäūra (modern Yalvar) in Śaka 1144, Chitrabhānu (1222 A.D.). Iñchuva Basavarasa, a *suṅkādhikāri* (customhouse officer) of the Tarddevāḍi-1000 during the reign of the Yādava king *Mahâdeva* appears for the first time in a record at Iṅgaleśvara dated in the year Krodhin

(1265 A.D.). Here the village of Iṅgaleśvara is spoken of as a *Janamejaya-datti.* Whether this term is connected with the Pāndava king Janamejaya or some other personage of this name is not known.

One more inscription was copied at Yalvar and may be mentioned here. It does not refer to any particular king but tells us that a chief, called Chenna-Basavarasa belonging to the Pāka-nāḍu family, was in the Śaka year 1479 administering the village of Yāḷavura in the Vijayapura-*sīme.* It is interesting to observe that Pāka-nāḍu was a division of the Telugu country which is now included in the Nellore district.

Impressions from the Western Circle.

Of the 942 impressions which remained to be examined in the total number of 1212 brought from the office of the Superintendent, Archæological Survey, Western Circle, 239 have been transcribed during this year. Five of them are Rāshṭrakūṭa records, 75 belong to the Chāḷukyas of Kalyāṇi, 7 are Kalachūrya, 22 Yādava, 2 Hoysala, 3 are later Kādamba, 2 Raṭṭa and 6 Vijayanagara records. The rest (*viz.* 117) are not assignable to any special dynasty. The texts of all of them are to be published in the proposed volume of the Kanarese Inscriptions in the Bombay Karnātak. Some of the most interesting records in this lot of 942 were mentioned in the *Annual Report* for 1929-30. Of the rest the following few may be reviewed here briefly.

A record of the Chāḷukya king *Vikramāditya VI,* which was found at Lakshmeśvara and which is dated in the Chāḷukya-Vikrama year 6, Dundubhi (A.D. 1082) mentions Jayakeśi-nṛipa of the Sagara family as administering the Purikara-300 district under the *yuvarāja* Trailokyamalla Vīra-Noḷaṁba-Pallava-Permāḍi-Jayasiṁha who was one of the king's brothers. This Jayakeśi who bore the *biruda* of Purikara-puravara-parameśvara appears here for the first time. Purikara (Kannaḍa: Purigeṛe), as we know, was the ancient name of Lakshmeśvara.

Two records belonging to the reign of the Yādava king *Siṅghaṇa* tell us that Malli-Seṭṭi was ruling the Karṇāṭa-*vishaya* under the orders of the king. One of them is dated in Śaka 11[49], Sarvajit (A.D. 1227). The only date known so far for this Malli-Seṭṭi was Śaka 1171 (A.D. 1249). He was administering Kūṇḍi and other provinces as a subordinate of *Kṛishṇa,* the successor of Siṅghaṇa in that year. With the help of this epigraph, therefore, we can not only take back the period in which Malli-Seṭṭi flourished by 22 years but are also informed that he was an officer both of Siṅghaṇa and of Kṛishṇa. The other record has lost its date but it tells us that Malli-Seṭṭi had one more son whose name was Reva; the other son being Chauṇḍi-Seṭṭi with whom we are already familiar.

Publications:

The Epigraphia Indica.

During the year 1930-31, part vii of Volume XIX of the *Epigraphia Indica* was passed for final printing and issue.

Among the contributions to the *Epigraphia Indica* which were passed for issue during the year under review the *Revised List of the Inscriptions of Northern*

India written in Brāhmī and its derivative scripts from about 300 after Christ by Professor D. R. BHANDARKAR requires foremost notice. It is coming out as an Appendix to the journal. The late Professor KIELHORN prepared a similar list which was published in this journal some thirty years ago. The supplement to it was brought out in 1905-06. That list and the supplement stood in need of a thorough revision. KIELHORN's list comprised some 716 inscriptions only. Since then more than twice this number of inscriptions have come to light. Many of the epigraphs listed before have been read and interpreted in the light of progressing research, and in consequence of which changes had to be made in the dynastic lists derived from them. In view of all these facts the necessity of an up-to-date list was keenly felt and it is hoped that the revised list will meet it. Professor BHANDARKAR, to add to its usefulness, has given a complete bibliography and the known details regarding the whereabouts of each of these inscriptions as well as the dynasties to which they belong. Part vii of Volume XIX of the *Ep. Ind.* gives the first forty-two pages of this list comprising 278 inscriptions. Beside these pages, the part gives the rest of Mr N. Lakshminarayan RAO's interesting article on the *Jura praśasti of Kṛishṇa III*, the former portion of which was published in the sixth part of this journal. It is a Kannaḍa record discovered by the late Mr Rakhal Das BANERJI at the hamlet of Jura some twelve miles from Maihar and not far from Jubbulpore; and its find in that locality would show that the conquests of Kṛishṇa III were not confined to the south but extended to Central India also. Though it is only a panegyric of Kannaṛadeva (*i.e.*, Kṛishṇa III) and is not dated, there is an allusion to the defeat of the Chōḷas by this powerful Rāshṭrakūṭa chief (*Chōḷana bēraṁ bērinde kiḷtan*); this shows that it must have been set up after he had killed the Chōḷa prince Rājāditya in 947 A.D., *i.e.*, about 963-64 or the time of the expedition to the north when he (*i.e.*, Kṛishṇa III) himself performed the ceremony of crowning Mārasiṁha as the ruler of Gaṅgapādi.

South-Indian Inscriptions.

In the publication of the *South-Indian Inscriptions* (*Texts*) *Series*, the seventh volume has been passed for final printing and is expected to come out shortly. A considerable portion of the next volume has also been sent to the press. The *Annual Reports on South-Indian Epigraphy* for 1928-29 and for 1929-30 have been prepared and the former is in the course of printing.

In the epigraphical collection of our Madras Office we have estampages of more than 2,000 Telugu and about 1,500 Kannaḍa inscriptions awaiting publication in the *South-Indian Inscriptions* (*Texts*) *Series*. To clear this heavy accumulation the Government of India have approved of my suggestion of entrusting the editing of these records to Mr J. Ramayya PANTULU and Dr R. SHAMASASTRY respectively. The impressions concerned have been sent to them and both these scholars are working on these epigraphs. The editing of the Kanarese inscriptions from the Bombay Karnātak which were copied by my office during the last five years, is taken up by my Assistants, Mr C. R. KRISHNAMACHARLU, Mr N. Lakshminarayan RAO and Mr R. S. PANCHAMUKHI. The texts of all these

epigraphs will be published in the same series. It has been decided to arrange all the records according to dynasties, and then in chronological order. Instead of giving a mere text, as has been done hitherto, a brief purport of the inscription and important facts mentioned in it will be given at the commencement of each text. A general critical introduction will be prefixed to the volume and at the end a suitable index will be added to enhance the value of the publication. The volumes on the Telugu and the Kanarese inscriptions will also be composed in the same manner.

Epigraphical Work in the Circles and Museums.

No epigraphical work is reported to have been done in the Frontier and the Northern Circles of the Department.

The Central Circle.

In the Central Circle eleven inscriptions were discovered at *Nālandā*. One of them contains a portion of the well-known Buddhist *Nidāna-sūtra* giving the concatenation of causes and effects which Gautama the Buddha taught after his attainment to Enlightenment; two are short votive records; six give the Buddhist creed formula in full or only partially; one has not yet been identified but seems to give some Buddhist text; and the eleventh forms the remaining portion of a fragment which was excavated in the year 1928-29. The last mentioned find completes the record and it has been fully examined. A note on it has also been supplied to the officer in charge of the Circle concerned. It is a Buddhist record and speaks of the several benefactions of a monk named *Vipulaśrīmitra* whom it describes as the disciple of Aśokaśrīmitra. The latter is mentioned as the *śishya* of Maitriśrīmitra who, in turn, was the disciple of Karuṇāśrīmitra. The inscription says that Karuṇāśrīmitra was done to death while staying at Somapura by a Bengal army—*V(B)aṅgāla-balair=upetya dahana-kshepāj=jvalaty=ālaye*—which set the house where he was residing on fire. This mention may indicate that the army was inimical to Buddhism. But the record is silent about the king to whom the force belonged. Vipulaśrīmitra, the epigraph further states, set up a statue of *Tārā* in the temple of Khasarpaṇa (Avalokiteśvara), carried out important repairs (*nava-karma*) to religious buildings at Choyaṇḍaka and consecrated an image of the Dīpaṅkara Buddha at Harshapura. It further says that this monk erected a shrine of Tārā and executed repairs to the Buddhist *vihāra* at Somapura. The inscription is a *praśasti* which was composed and engraved respectively by two persons named Kanakaśrī and Vasishṭha.

The Eastern Circle.

The Superintendent of the Eastern Circle secured fresh impressions of *the nine inscriptions on the walls of the Western Tomb of Zafar Khan Ghazi at Tribeni* in the Hooghly district of Bengal. The stone slabs bearing these inscriptions, he thinks, formed part of some Hindu buildings, the spoils of which were utilized for constructing the tombs and a mosque at this place. These are labels describing some scenes from the *Rāmāyaṇa* and the *Mahābhārata* such as

the marriage of Sītā, the fight between Dhṛishṭadyumna and Duḥśāsana, *etc.*, and are written in Sanskrit language and proto-Bengālī characters of about the 12th century after Christ. They are incised below the bas-reliefs representing the scenes they mark.

The Western Circle.

Rai Bahadur Daya Ram SAHNI when he was Superintendent, Archæological Survey, Western Circle, examined 10 interesting *copper-plate inscriptions at Vala*, the modern representative of the old Valabhī, and got them copied. The note on them which he sent to me runs as follows:—

"These copper-plates contain five separate grants (*śāsana*) each inscribed on a set of two copper-plates. The plates are inscribed on one side only and are strung on ovally shaped copper rings to which is attached the usual royal seal. Out of these five grants, numbers 2, 3 and 4 were issued by *Śilāditya I* of the Valabhī dynasty, grant number 5 by *Dhruvasea II Bālāditya*, and the fifth (grant No. 1) by the *Mahāsāmanta Mahārāja Varāhadāsa II* of the family of the Gārulakas, who were a feudatory dynasty of the Valabhī Kings. The names of three predecessors of this prince are also supplied, *viz.* those of his elder brother, Mahārāja Śūra II, the latter's father, Senāpati Varāhadāsa, and the latter's father Mahārāja Śūra I. The object of this document is to record the grant of 100 *pādāvartas* of land in the village of *Bhaṭṭipadra*, which was situated near Phaṁka-praśravaṇa, for the maintenance of Buddhist nuns and for the maintenance of lamps in honour of the Bhagavat (the Buddha). The date of this inscription is Sam. 230 = 549 A.D. The donor, to judge from the figure of Garuḍa on the seal, must himself have been a Vaishṇava." The family of the Gārulakas is already known to us from the inscription of Siṁhāditya which was published in the *Epigraphia Indica* several years ago. "It would be interesting to identify the two places mentioned in this inscription. Phaṁkapraśravaṇa was apparently the headquarters of this tributary family of the Gārulakas. My enquiries at Vala failed to throw any light on the identity of these places. The termination *padra* of Bhaṭṭipadra also occurs in the name of another village named Śivaka-padra mentioned in the Maliya copper-plate inscription of Dharāsena II of the Valabhī dynasty."

"The seals attached to the remaining four grants bear the usual recumbent bull, the vehicle of Śiva, and the legend *Bhaṭārka*, which was the name of the founder of the Valabhī dynasty. Grant No. 2 is dated in Sam. 287 (A.D. 606), grant No. 3 in Sam. 290 (A.D. 609), grant No. 4 also in the same year and grant No. 5 in the year Sam. 319 (638 A.D.). The donees of grant No. 2 were also the community of Buddhist nuns who were residing in the *Yakshaśūravihāra*, owing to their own monastery at Valabhī having become extinct. The donation consisted of the village of *Nigguḍaka* in the Ghāsaraka-pathaka. Both these places require to be identified. The donees of grant No. 3 were also the same community of Buddhist nuns as well as those of grant No. 5 from which it appears that the monastery of Yakshaśūra was situated in the vicinity of Valabhī. The village whose donation is registered in this inscription was named Nāgadinnānaka

in the Rohaṇaka-pathaka in the Surāshṭras, *i.e.*, Kathiawar. The recipients of the grant of the village of Danturāputra in Maṇḍalī-draṁga, mentioned in Grant No. 4, were two Brāhmaṇas who had come from Daśapura (Mandasor in Gwalior) and were then residing at Valabhī."

The Burma Circle.

In the Burma Circle copies of several records of repairs to the temples at *Pagan* were prepared. These, the officer in charge reports, not only give us the history of those shrines but supply us with specimens of writing in different periods and enable us to study various architectural details which were introduced at the time when those repairs were effected. These temples contain the horoscopes of certain individuals and furnish us with the dates of some undertakings which are very helpful in checking several Burmese dates and in ascertaining whether it was the *Sūrya-Siddhānta* or any other *Siddhānta* which was followed in ancient Burma in the matter of astronomical reckonings or computations.

Further, six new inscriptions have been discovered, one at *Halin*, and the rest at *Pagan*. The former is very fragmentary and palæographically belongs to about the 14th century A.D. It is written in Burmese, and is a record of the dedication of slaves to a pagoda by a monk called *Haṁsavati Mather*. Of the inscriptions found at Pagan, one is in Pāli, though like the rest it is written in the Burmese script of about the 14th century of the Christian era. The inscription which was found near the Ānanda Temple seems to be the record of the building of a monastery and a tank, and of the dedication of slaves and lands to the Buddhist *triratna*—*Buddha*, *dharma* and *saṅgha*—by a trader named *Nam Palet Ti* in about the year 755 Sakkarāj (=1393 A.D.). Of the minor epigraphical remains found during the year one requires a brief notice. It is a small amber seal found in a mound at Pyogingyi at *Hmawza* (Old Prome). The Officer in charge of the circle says that the legend which it bears is written in some South Indian script and reads *Divarashṭa*.

The Southern Circle.

Mr K. V. Subrahmanya AIYER, Superintendent for Epigraphy, reports that 374 inscriptions on stone and 2 on copper-plates were copied from 67 villages lying in the Chingleput, Tanjore, Trichinopoly, Salem, West Godavari, Guntur and South Kanara districts of the Madras Presidency. They belong to the various dynasties of Southern India. All of them will be reported in the *Annual Report on South Indian Epigraphy* pertaining to this year. Two hundred and sixty inscriptions are in Tāmil and the rest are either in Telugu or in Kannaḍa. The most important ones may be briefly noticed here. The *Pallava* inscriptions copied during the year throw additional light on the question of the Pallava supremacy in the south about the 9th century of the Christian era. The epigraphs which belong to the reign of *Nandivarman III* (*cir.* 830-854 A.D.) and *Nṛipatuṅga* (*cir.* 854-880 A.D.) would show that these Pallava rulers must have continued to maintain their hold on the districts of Tanjore and Trichinopoly in which they were found. The Tiruvāḍi inscription of Nṛipatuṅga indicates

that the Pāṇḍya king *Varaguṇa II* held a subordinate position under him. One of these records would show that his queen named *Vīramahādeviyār*, who was not known to us before, performed the *hiraṇyagarbha* as well as the *tulābhāra* ceremony at Tirukkōḍikā and presented gold to the Tiruchchatturai Temple in the Tanjore district. *Aparājita Pallava*, we know, vanquished the Pāṇḍya king Varaguṇa II but was himself overcome by the Chōḷa king *Āditya I* about the close of the ninth century. According to the Tiruvālaṅgāḍu plates he was killed by this Chōḷa ruler. In the present collection there are several records which, on palæographic grounds, may be ascribed to Āditya I. They were also found in the district of Tanjore and they clearly show that the Pallava supremacy, over these parts of the country in any case, finally passed away with Aparājita.

The *Chōḷa* records found this year mention some new royal ladies, such as *Trailokyamalladevī*, who was the wife of *Parāntaka I*, and *Muḷḷūr-naṅgai* who was the mother-in-law of *Parakesarivarman*. An inscription of *Vikrama-Chōḷa* (1118-1135 A.D.) refers to a grant made by Parāntakaṉ-Māḍevaḍigal *alias* Śembiyaṉ-Mahādeviyār, the mother of Uttama-Chōḷa and seems to throw some light on the question of the right of succession of a *marumagaṉ* or sister's son to his maternal uncle's property.

In the Kailāsanātha Temple at *Conjeeveram*, Mr Subrahmanya AIYER was able to carefully examine the fragments of a long Sanskrit inscription which the late Dr HULTZSCH had briefly noticed in the first volume of the *South-Indian Inscriptions* series. Putting them together he has succeeded not only in reading the date fully but in identifying the king *Bhīma* mentioned in the text. The year of the inscription as now read is 923 of the Śaka era. The record seems to give the genealogy of the Eastern Chāḷukyas. Among the kings it speaks of occur the names of Vijayāditya-Guṇagāṅka, Chāḷukya-Bhīma I, Kollaviganda, Chāḷukya-Bhīma II and Dānārṇava-Nṛipakāma. The inscription would show that *Rājarāja I* captured the powerful chief Bhīma and that Dānārṇava-Nṛipakāma dispatched Kāmārṇava to heaven. Rājarāja I, according to his inscriptions, conquered Vēṅgī about 999 and Kaliṅga about 1000 (A.D.). The Tiruvālaṅgāḍu plates would show that he defeated an Āndhra king called Bhīma. On the authority of the present record, Mr Subrahmanya AIYER thinks that this Bhīma must be a Telugu-Chōḷa ruler and not the Eastern Chāḷukya king Vimalāditya surnamed Mummaḍi-Bhīma and Birudaṅka-Bhīma. The inscription under notice further shows that the Kāmārṇava whom Dānārṇava had routed must be identified with the Eastern Kaliṅga king Kāmārṇava IV, the father of Vajrahasta IV.

Among the Telugu records of the present collection there is a fair number of *Kākatīya inscriptions*. Those of king *Gaṇapati* refer to Gaṇḍapeṇḍāra Ambadeva Mahārāja, Gaṇḍapeṇḍāra Gaṅgāya-Sāhaṇi and Nāmadeva-Paṇḍita who took an active part in the government of the country. An inscription of Rudrāmba, dated in the Śaka year 1191, speaks of an officer *Bāhattara-Niyogādhipati* Poṅkala Mallaya Preggaḍa and his chief Tripurārideva with whom we were not familiar before.

In the Kannaḍa inscriptions the one written in the characters of about the ninth century of the Christian era makes mention of a chief named *Nṛipamalla* whom we did not know before. This record would indicate that he was the overlord of the Kadamba king of his time.

The Rajputana Museum, Ajmer.

According to the report which Mahamahopadhyaya Rai Bahadur Gaurishankar H. Ojha has sent, fifteen inscriptions were copied for the Rajputana Museum at Ajmer during the year under review. Of these, five are the copper-plate inscriptions from Vala which have been noticed above. Among the rest, which in date range between the years 1150 and 1728 A.D., only a few require notice in this résumé. One is the Chitorgarh *praśasti* of the Chāḷukya king *Kumārapāla* of Gujarat which is now preserved in the Udaipur Museum. According to the said scholar's report, it shows that Kumārapāla, the son of Tribhuvanapāla, succeeded Jayasiṁha and visiting Chitrakūṭa (Chittor) built a temple of Varāha there and endowed it with the grant of the village Duṇā-udā. The date of the inscription is given at the end but is effaced. The Rai Bahadur thinks that it must be Saṁvat 1207 (=A.D. 1150), *i.e.*, the year in which Kumārapāla visited Chittor according to the other inscription which is found there. The other noteworthy record he calls the Āhāḍa grant of Chāḷukya *Bhīmadeva (II)* which was issued from Aṇahilapāṭaka on Sunday, the 2nd day of the bright half of Śravana in Saṁvat 1263 (A.D. 1207). The geneaology of the Chāḷukyas of Aṇahilapāṭaka in order of succession given in it is: (1) *P. M. P.* the illustrious Mūlarājadeva, (2) *P. M. P.* Chāmuṇḍarājadeva. (3) *P. M. P.* Durlabharājadeva, (4) *P. M. P.* Bhīmadeva, (5) *P. M. P.* Karṇadeva *alias* Trailokyamalla, (6) *P. M. P.* Jayasiṁhadeva *alias* Avantinātha, Tribhuvanagaṇḍa, Barbarakajishṇu (*i.e.*, the conqueror of Barbaraka) and Siddhachakravartin (Siddharāja), (7) *P. M. P.* Kumārapāladeva, conqueror of the lord of Śākambharī, (8) *P. M. P.* Ajayapāladeva who exacted tribute from the ruler of the Sapādalaksha country, (9) *P. M. P.* Mūlarājadeva (II), the conqueror of the lord of Garjanaka (Ghazni, *i.e.*, Shihābuddīn Ghūrī), and (10) *P. M. P.* Bhīmadeva *alias* Abhinavasiddharāja (Siddharāja II). This inscription registers some grants made by the last named ruler in Mēdapāṭa or Mewar which was also under him. In the remaining documents, the copper-plate grant of *Mahārājādhirāja Mahārāṇa Rāyamalla* of Mewar, dated on the 15th day of the dark half of Vaiśākha in Saṁvat 1552 (A.D. 1495), and of *Mahārāo Suratāna* of Sirohi which is dated on the 8th day of the dark half of Āshāḍha of Saṁvat 1634 (A.D. 1577) deserve a brief mention.

MUSLIM EPIGRAPHY: 1930-31.

By Mr Ghulam Yazdani.

During the year under report the Director General of Archæology in India sent five inscriptions for decipherment and publication in the *Epigraphia Indo-Moslemica.* Three of them were copied at the instance of Mr Stapleton by

Mr G. C. CHANDRA, Superintendent, Archæological Survey, Eastern Circle. The slabs bearing these inscriptions are fixed into the wall of the *dargāh* of Maulana ʻAta Shah at Gangarampur, District Dinajpur, and the records belong to the reigns of the Bengal Kings, *Kaika'us* (691-702 H.), *Sikandar Shāh I* (759-92 H.) and *Muzaffar Shāh* (896-99 H.). The Kaikaʻus inscription has already been studied in detail in the *Epigraphia Indo-Moslemica* for 1917-18; the Sikandar Shāh and Muzaffar Shāh records, were deciphered previously by Prof. BLOCHMANN;[1] yet his readings can be improved upon on certain important points. In the case of the Muzaffar Shāh inscription, Prof. BLOCHMANN has omitted the date (896 H.) given at the end of the inscription and he also read wrongly the title of the King as *Abul Mu'in* instead of *Abu'n Nasr*, which is clear on the stone and tallies with the title given on the coins of this king.[2] These two records have now been published in the *Ep. Ind.-Mos.* for 1929-30, pp. 9ff.

The other two records received for examination from the Director General of Archæology in India are from Gujo in the Mirpur Sakro Taluka of the Karachi District. As one of these records belongs to the reign of *Fīroz Shāh Tughlaq* (752-90 H.) and as it has not been published before, the Director General has been requested to arrange for the taking of estampages with the view of printing them in the *Epigraphia Indo-Moslemica.*

Rai Bahadur Daya Ram SAHNI, has kindly drawn the attention of the Government Epigraphist for Moslem Inscriptions to another record belonging to the reign of *Sikandar Shāh Lodi* (894-923 H.), and as its text is inscribed in two languages, Sanskrit and Persian, in both of which Mr SAHNI is proficient, the Government Epigraphist has asked him to edit it for the *Epigraphia Indo-Moslemica.* In the mean time it may be stated that the inscription records the building of a well during the reign of Sikandar Shāh in 923 H. (1517 A.D.).

The salient feature of the year's work is however *a thorough survey of Raichur, Udgir* (Bidar Distt.) *and Yadgir* (Gulbarga Distt.) which were reported to abound in Moslem records. At Raichur as many as forty inscriptions have been copied while at Udgir twenty-seven were noticed, and estampages of all of them have been prepared. The find at Yadgir was rather small, consisting of five inscriptions only. Some of these inscriptions are referred to in an Urdu work, but none of them has been studied systematically as yet. They are therefore being carefully deciphered and will be published shortly with suitable notes. The Raichur inscriptions comprise several records of the Baihmani Kings but the majority there belong to the Bijapur chiefs and throw light on the political conditions of their territory. The Yadgir inscriptions belong to the Nizām Shāh and the Mughal Kings while the Yadgir records all bear the names of the Bijapur rulers.

An *Arabic inscription* was received for decipherment from the Archæological Commissioner, *Ceylon.* A transcript and an English translation of this record were made at the office of the Government Epigraphist for Moslem Inscriptions and sent to the Archæological Commissioner who is now planning to publish them

[1] *J. A. S. B.*, XLI, pp. 104-07.

[2] *Catalogue of Coins in the Indian Museum*, I, pp. 171-72.

with the Tāmil and Chinese versions of the inscription in the *Epigraphia Zeylanica.* The inscription gives a list of the offerings made to a Buddhist shrine.

The Superintendent, Archæological Survey of India, Eastern Circle, reports that he prepared during the year estampages of several inscriptions in the Hooghly and Dinajpur Districts at the instance of Mr STAPLETON, Director of Public Instruction, Bengal.

He also noticed six grey stone-slabs of uniform height (8½″) containing 12 lines of Arabic inscription on the inner walls of a grave, built of fine Gaur bricks and stone in the Malda District. The estampages of these inscriptions were examined by Mr SHAMSUDDIN AHMAD of the Archæological Section, Indian Museum, Calcutta, who found that the writing consists of quotations from the Qurān.

Epigraphia Indo-Moslemica.

Dr M. NAZIM has contributed an article to the ensuing number of the *Epigraphia Indo-Moslemica* on "Two Arabic Inscriptions at Champaner" which are interesting as being contemporaneous with the conquest of the Champaner Fort by *Sulṭān Maḥmūd Bigarha* in 889 H. (1484 A.D.).

This number also contains articles by Mr C. R. SINGHAL and Mr R. G. GYANI of the Prince of Wales Museum, Bombay. Mr SINGHAL's article deals with a Persian inscription of Gujarat mentioning the dedication of a *sarāi* by one *Dastūr Khān* who by his titles seems to be a Wazir although his name does not occur in the contemporary history of Gujarat. Mr GYANI's paper deals with an inscription of *Aurangzeb* recording the building of the city wall of Nasik. The date 1092 H. given in the inscription agrees with the time of the expedition of Aurangzeb for the conquest of the Deccan.

Another article in this number is on the inscriptions of Bhilsa by Mr R. S. SAKSENA of the Archæological Department of the Gwalior State. The principal record studied in this paper belongs to the reign of *Maḥmūd Shāh Khaljī* of Malwa and it mentions the building of a mosque by one Saif-ul-Mulk Khujandi.

EPIGRAPHICAL SUMMARY FOR 1931-32.

By Mr K. N. Dikshit.

The Inscription of Mahasthan.

The most important epigraphical discovery of the year is that of *a small tablet of buff sandstone at Mahasthan* in the District of Bogra in Bengal. It is engraved with six lines of writing in ancient Brāhmī characters of about the third century B.C. and is the first record of its kind ever found in Bengal. Its importance for the history of the province of Bengal and to the problem of the identification of the ancient capital of the Puṇḍras can not be exaggerated. The record is apparently an instrument of instructions from the Imperial capital of the Mauryas for the guidance of the officer in charge of the store or granary regarding remissions and recoveries in times of distress. It is almost similar in character to the inscription on the copper-plate found at Sohgaura in the Gorakhpur

District, with which it is undoubtedly contemporary. The distinct mention of *Puḍanagara* (Sanskrit *Puṇḍranagara*) in this inscription confirms the identification of Mahāsthān with the city of Puṇḍranagara or Puṇḍravardhana which was first proposed by General CUNNINGHAM.[1] The record has been edited by Prof. D. R. BHANDARKAR in the *Epigraphia Indica*.[2]

Bilingual Inscription from Hmawza.

Another discovery made during the year was that of a *Sanskrit-Pyu bilingual inscription* in Burma which brings the possibility of the decipherment of the Pyu language appreciably nearer. The inscription is engraved on all sides of the pedestal of a Buddha statue from *Hmawza* near Prome, and the photographs and impressions of the record were sent to the Government Epigraphist for decipherment. The inscription yields eight complete Sanskrit verses in the *Vaṁśasthavila* metre, each word being followed by a Pyu translation which in some cases constitutes a lengthy explanation of the original expression. The purport of the inscription is not clear, but it possibly records the consecration of the statue by a prince named *Jayachandravarman.* It commences with a reference to the building in one day of two cities in both of which a Buddhist teacher named the venerable *Guha* (*Āryaguhādhipa*) was preaching. Apparently both Jayachandravarman and his younger brother Harivikrama who was ruling over the other city, were associated in the present gift and the 'increase of the feeling of mutual love' between the two brothers and eternal friendliness between the two cities is alluded to. The sentiments expressed in the latter part of the record that the citizens of the two cities and descendants of the two kings will keep the traditional path of peace and be free from disease, *etc.*, are in accordance with Buddhist tradition. But the great point of interest is the prevalence in Burma at this early period (which cannot be later than the sixth or seventh century A.D.) of Sanskrit or Mahāyāna Buddhism, which apparently gave way before the overwhelming strength of Pāli Buddhism during later times. The presence of royal families with names ending in Varman and Vikrama in the old Prome area which has already been known from the Payagyi funerary urns[3] and the Hmawza silver *stūpas*,[4] is confirmed by this inscription. The dates proposed for the former by Mr BLAGDEN will now have to be revised, and the existence of some other reckoning in Burma before the introduction of the modern Burmese era of 638-39 A.D. is now certain. The inscription is being dealt with by me for publication in the *Epigraphia Indica.*

Inscription from Pokharana, Jodhpur State.

Among other inscriptions brought to the notice of the Government Epigraphist were *two inscribed pillars* discovered by the Superintendent, Archæological Department, Jodhpur, at *Pokharana,* ancient *Pushkaraṇa,* on the borders of Jaisalmer State. Both the stones open with a verse in praise of the Sun-god.

[1] *A. S. R.*, Vol. XV, p. 104ff.
[2] Vol. XXI, Part ii.
[3] *Ep. Ind.*, Vol. XII, pp. 127ff.
[4] *A. S. R.*, 1926-27, pp. 176, 201.

and are apparently to be referred to the same period, *i.e.*, the early 11th century A.D. One of these inscriptions, however, appears to be a hero-stone set up in commemoration of a prince called *Madana*, son of Punyapushpa of the Guhiloṭa dynasty, who was killed on the battle-field when fighting for the possession of some cows. The other records the construction of a temple by *Dhanapāla* of the Pramāra (*Paramāra*) dynasty in commemoration of his father Ghīṁghaka. The latter inscription is dated on Saturday, the 6th of the bright half of Āshāḍha, V. S. 1070, which is equivalent to Saturday, the 26th July, 1012 A.D., the year being Northern Vikrama current.

A Telugu Inscription from Koilkunda, Hyderabad State.

The Director of Archæology, Hyderabad State, Deccan, sent for decipherment *a Telugu inscription on a small pillar* in front of *the fort gate at Koilkunda*, District Mahbubnagar. The record is engraved on three faces of the pillar and consists of 104 lines. It records that when *Ibrāhīm Quṭb S̱ẖāh* of Golconda was residing at Vijayanagara, the garrison of the fort of Koilkunda swore the Prince an oath of allegiance. One point of interest about the inscription is its date which works out as equivalent to January, 1551 A.D. The date of the accession of Ibrahim Qutb Shah as given by FIRIS̱H̱TA as well as by the author of the *Tārīḵẖ-i Quṭb S̱ẖāhī* is, however, 1550 A.D. It would appear, therefore, that either the date of the accession of the king has to be corrected, or that the garrison commemorated the day of their allegiance after the king's accession.

Publications: The Epigraphia Indica.

During the year four parts of the *Epigraphia Indica viz.*, Parts i-iv of Vol. XX, were issued. Only six articles were included in these parts covering 70 printed pages, the rest of the space being allotted to Dr D. R. BHANDARKAR'S *A List of the Inscriptions of Northern India written in Brāhmī and its derivative scripts from about A.C. 300.* By far the most important inscriptions published are the *Prākrit inscriptions from* the Buddhist site at *Nāgārjunikoṇḍa*, which have been very ably dealt with by Dr J. PH. VOGEL. Besides dealing with the epigraphical and historical importance of the finds, Dr VOGEL has discussed at some length the geographical and linguistic data supplied by the inscriptions and added an exhaustive glossary at the end. The *stone inscription from Nālandā* edited by Dr Hirananda SASTRI is another important record bearing on the power and extent of the dominions of the Emperor Yaśovarman. The author's identification of Yaśovarman with Yaśodharman of the Mandasor inscriptions has, however, not been recognized by other scholars, who assign it on palæographic grounds to Yaśovarman of the 8th century, the contemporary of Lalitāditya of Kashmīr. The importance of the document can, however, be hardly exaggerated. In editing *the three Tamil inscriptions from Lalgudi*, Mr K. V. Subrahmanya AIYER has attempted to fix the chronology of the early Pāṇḍya kings, and has proposed a new way of interpreting the complicated system of mentioning the regnal dates adopted by them. Rai Bahadur Daya Ram SAHNI who has edited the *Suṅga inscription from Ayodhya*, after reviewing the literature on the subject, has come

to the conclusion that on palæographic grounds the inscription must be assigned to the 1st century A.D. and that Ayodhya undoubtedly formed a part of the Śuṅga Empire as late as the date of the inscription. The *Paharpur copper-plate grant* of the Gupta year 159 is an important document found in the course of the excavations at the place and edited by me. It records the purchase and donation of fallow State land by a Brāhmaṇa couple for the benefit of a Jaina Vihāra. The last record published in the parts brought out during the year is *the Koṭavumachgī inscription of Vikramāditya V* edited by Mr R. S. PANCHAMUKHI. It is dated in the Śaka year 934 (=1012 A.D.) and reveals the name of a hitherto unknown feudatory of the Chāḷukya Emperor Vikramāditya. The inscription records the donation of a village for the maintenance of the temples, in which was maintained a college with a free hostel attached, where instruction was imparted in grammar, philosophy and other subjects. The fines on certain crimes and certain rates and taxes were also enjoined to be utilized for the repairs of a tank. The record is thus very interesting to the student of education and village administration in the Karnātak.

South Indian Epigraphy Office, Madras.

The transfer to Madras of all South Indian epigraphical work hitherto carried on in the office of the Government Epigraphist was carried out during the year, and the office, which in future will be known as the Office of South Indian Epigraphy, is to be in charge of the Superintendent for Epigraphy. The coordination of the work in South Indian epigraphy could not, however, be productive, inasmuch as owing to the prevailing financial stringency the strength of officers in this branch was reduced from three to one officer. As a result, the collection of Kanarese inscriptions in the Bombay Karnātak was interrupted, but much progress was done in the matter of bringing the work of publication more up-to-date. The 981 inscriptions collected from the Bombay Karnātak during the last six years were arranged dynastically and chronologically for publication in a separate volume. Progress was also made with the publication of Telugu and Kanarese inscriptions collected in the Madras Presidency which are being edited by two well-known outside scholars in separate volumes of the *South Indian Inscription Series*. As for the Tamil inscriptions, the final proof of Vol. VII of the *South Indian Inscription Series* was passed by Mr K. V. Subrahmanya AIYER, Superintendent of Epigraphy, who retired during the year. About 600 pages of manuscript have also been sent to the press for inclusion in Vol. VIII by that scholar, in whose name the whole volume will be published, and who will continue to edit it during his retirement. The *Annul Report on South Indian Epigraphy for the year 1928-29* was issued during the year, while that for 1929-30 was in the final proof stage.

The following account of the work done in the Office of South Indian Epigraphy at Madras has been received from Mr C. R. KRISHNAMACHARLU, Superintendent for Epigraphy:—

"During the year under report 267 villages were inspected in the Chittoor, South Kanara, Madura, Ramnad and Tanjore districts of the Madras Presidency

and 345 stone inscriptions were copied. Six copper-plate grants were also examined during the year. Almost all the known ancient dynasties of South India are represented in the collection. Of special interest are the inscriptions of the Rāshṭrakūṭas, the Gaṅgas, the Bāṇas and Early Chōḷas (of the Telugu country) discovered in the Punganur *tāluk* of the Chittoor district.

"Among the *copper-plate records* is an inscription of the hitherto unknown king *Anantavarman* who is styled 'the Lord of Kaliṅga' and who calls himself a 'Vāsishṭha.' The latter epithet clearly suggests that he belonged to the Vasishṭha-*gotra*. He was the son of Mahārāja Prabhañjanavarman and the grandson of Mahārāja Guṇavarman. The plates are reported to have been discovered at *Siripuram*, 7 miles from Chicacole in the Ganjam district.

"The inscriptions of the Punganur territory are mostly in Kannaḍa and are engraved in characters assignable to the period between the 8th and the 10th centuries A.D. They are mostly records of the death of warriors in cattle-feuds and of grants of land made to their memory, which are known under the name *kaḷ-nāḍu*. The feuds were occasioned by raids on cattle made by hostile chiefs of the different local dynasties of the period, one acting against another, such as the Vaidumbas against the Bāṇas, the latter against the Nōḷambas or otherwise according to the political exigencies of the time. This country which in inscriptions is called Puli-*nāḍu* generally and in one case Puli-*nāḍu*-Sixty was frequently changing masters in those troublous times as it was the debated borderland between the territories of the Western Gaṅgas, the Chōḷas, the Rāshṭrakūṭas, the Nōḷamba-Pallavas, the (Tāmil) Chōḷas and the Bāṇas. While almost all the inscriptions of this period are records of raids and sieges and death of warriors, those of the subsequent times, *i.e.*, of the time of the Chōḷa king Rājarāja I and his successors afford a pleasing contrast by reflecting a state of peace and prosperity in which tanks were dug and grants were made for services in temples.

"The earliest inscription from this region is a record of Puṇyakumāra who bears the titles *mahārājādhirāja*, *paramesvara*, and *pulvarinātha* and who may be tentatively identified with the Chōḷa king Puṇyakumāra of the Malepadu plates. In his time the Bāṇa king Bāṇarasa led an expedition against Maïnda-Nōḷamba (Mahendra-Nōḷamba). The title Pulvarināthа, *i.e.*, 'the Lord of Pulvari', is evidently based upon some connexion with, or on the king's dominion over, the district of Pulveri-*nāḍu* mentioned in a record of the 9th century A.D. coming from the Madanapalle *tāluk* of the same district. An inscription in characters of the 10th century mentions Chōḷa-Mahārāja as ruling over the Puli-*nāḍu*-Sixty division.

"Of the 8 Bāṇa inscriptions three purport to belong to king *Mahābali-Bāṇarasa* who was 'ruling the earth' and two to Mahābali-Bāṇarasa who was 'governing the Vaḍugavali-Twelve-Thousand and the Gaṅga-Six-Thousand'. These are all in characters of about the 9th century. One of these belongs to king Vikramāditya Bāṇarasa (I?) and in an other figures his son Prince Vijayāditya II (Prabhumeru). Hostilities conducted against the Vaidumbas are referred to incidentally in still an other.

"While Sembiya Mahābali-Bāṇarasa of the 10th century was ruling over the Bāṇavāḍi-Twelve-Thousand, his subordinate *Pallava-Dhavala* was governing the Puli-*nāḍu*. *Gaṇḍaroḷgaṇḍa* Pallavaraiya and Paramesvara Pallavamalla figure as local rulers in two records of the 10th century, while according to another record of the same period a certain Mayimana Pallavarāyar (*i.e.*, Mahimana-Pallavarāyar) was governing the *nāḍu* as a subordinate of Permadi, *i.e.*, the Western Gaṅga king who must be either Būtuga, the ally of Rāshṭrakūṭa Kṛishṇa III or Rakkasa Gaṅga who figures in a record of this year from the same region.

"A Nōḷamba-Pallava inscription giving the genealogy *Ekavakya Iriva-Nōḷamba* (evidently Dilīparasa) mentions two sons of Vīra-Mahendra, *viz.*, Ekavakyadeva and Iriva-Nōḷamba Ghateyaṅkakara Pallavāditya. This last king, Pallavāditya, evidently conquered what was formerly the Bāṇa country as he is stated to have attacked Vendura-Ponne in Paruvi-*nāḍu*. There he dubbed a local *gāvuṇḍa* as Pallavāditya-Nōḷamba-Gāvuṇḍa conferring upon him certain insignia and granting him a village in Puli-*nāḍu*. As a subordinate of Nōḷambādiyarasa (*i.e.*, Nōḷambādhirāja) probably Dilīparasa I (circa Śaka 864), Pṛithivīpati-arasa was governing the *nāḍu*. This chief might be the Gaṅga-Bāṇa prince Pṛithvīpati II who had been a subordinate of the Chōḷa king Parāntaka I.

"Three epigraphs of the Rāshṭrakūṭa king *Kannaradeva* (*i.e.*, Kṛishṇa III) mention his subordinate Vajjaradeva, *i.e.*, Vajradeva, as the governor of the Puli-*nāḍu* in and about A.D. 964. He is evidently identical with the Vajjaladeva who figures as a subordinate of Śrī-Ballaha in a record of Śaka 887 from Embaḍi in the Punganur *tāluk*. This suggests naturally that Śrī-Ballaha was the Rāshṭrakūṭa Kṛishṇa III. Vajradeva's capital appears to have been at Siyapāḍi, identical with Sivadi in the Punganur *tāluk*. Three undated inscriptions of his not mentioning the ruling sovereign probably belong to the period subsequent to the death of Kannaṛa. It is very likely that he assumed independence now, as one of these records describes him as 'ruling the earth.'

"A Kannaḍa record belonging to the Chōḷa king *Madiraikoṇḍa Parakesarivarman*, *i.e.*, Parantaka I, is a very valuable document as it gives him the late date of the 48th regnal year for the first time now, and it prolongs his reign up to at least 955 A.D. In the light of this record the surmises made hitherto regarding the date of his death need revision. A certain Sivarayya was at this time governing the Pali-*nāḍu* as Parantaka's subordinate.

"An inscription of about the 8th century A.D. copied at Vaddarase in the South Kanara district refers to the reign of king *Aḷuvarasa* and mentions his subordinate Kandavarmarasa. These names occur here for the first time.

"The details of village administration and village assemblies in ancient India on which interesting light has been thrown by several inscriptions in Southern India, are further elucidated by a *Tamil inscription* copied this year *from Senganur* in Tanjore District. Among the subjects dealt with in this record are the procedure of election to the village assembly, the treatment of offenders, the regulations of taxes and rates, financial powers and limitations of village assemblies and other interesting details of village administration.

"The following points of interest in the Kanarese records from the Bombay Karnātak dealt with during the year deserve mention. When after the overthrow of the Rāshṭrakūṭas by the later Chāḷukya king *Taila II* their entire realm passed to the Chāḷukyas, a few members of the Rāshṭrakūṭa family became their subordinates. In an inscription at Banaśankari, the Rāshṭrakūṭa chieftain *mahāmaṇḍaleśvara Bhīmadeva* figures as a subordinate of Āhavamalla (Taila II) though Taila II himself before achieving independence was a subordinate of Krishṇa III governing the Taravāḍi-Thousand country in 965 A.D. An inscription in the Gadag *tāluk* brings to light a hitherto unknown son of the Western Chāḷukya king Jagadekamalla Jayasiṁha II named Dāsarasa, who as a *mahāsāmanta* was ruling over the Māseyavāḍi district in 1022 A.D."

Epigraphical Work done in the Circles and Museums.

The Western Circle.

Six inscriptions were copied at Bijapur by the office of the Superintendent, Archæological Survey, Western Circle. The earliest in the series is the *Kanarese inscription at Karim-ud-din's Mosque* which refers itself to the reign of the Yādava king *Kanharadeva* and is dated Śaka 1179 (=1257-58 A.D.). It registers a grant of land by a certain Karasideva who was the *āchārya* of some temple, probably of the Jainas. It has long been known that the mosque known as Malik Karim-ud-din's Mosque was originally a Jaina temple. The present inscription supports this view. Another record on the same Karim-ud-din's Mosque is in *Marāṭhī* and records the *grant* of a rent-free land by *Malik Krimidina* (Karim-ud-din) to one Reva or Revayya, the architect who built the mosque for his father Mālik Kafūr in the Saka year 1242 (=1320 A.D.) during the reign of Quṭbu-d-dīn Mubārak Shāh of Delhi. The record is probably the earliest Moslem inscription in the South and the earliest Marathi inscription in the Bijapur District. The *Sanskrit inscription* in *Ali Khan's Bauri* near Ibrahim Rauza records that in the reign of the Sulṭān Muḥammad Shāh, the king's physician by name *Viṭhala Paṇḍharī* built the well for the benefit of the public. The other three records from Bijapur are also in Marathi and belong to later dates.

The Central Circle.

In the Central Circle two incomplete inscriptions were discovered at *Nālandā*. One of these was a part of the *Buddhist creed* written in characters of the 10th century A.D. on a fragmentary halo of some image, and the *other inscription*, also fragmentary, is *on a broken Tārā image*.

An important but imperfect *Brāhmī inscription* on a slab of yellow jasper preserved at Semarsal has been already mentioned *suprâ*, p. 140.

Epigraphical work in Burma.

U MYA, Superintendent of the Burma Circle, Mandalay, sends me the following summary of the epigraphical work done in Burma during 1931-32:—

"Among the new inscriptions discovered during the year under report there was one from *Bassein in Lower Burma*. According to a note received from the Deputy Commissioner, Bassein, it was found in two pieces by a cultivator in the

Kyaunggon Township of Bassein District, while ploughing his field. Unfortunately it was in a bad state of preservation and only a few words of each of the first seven or eight lines could be read, the rest being much damaged. It is, however, of sufficient interest as the language is Burmese, and the date 1274 A.D. according to the date in the common Burmese era given in the first line. The record thus testifies to a Burmese settlement at Bassein in the heart of the Môn country at that period, and is at same time *the earliest Burmese epigraph* that has so far been discovered there. From what can be made out of the rest, the inscription records the building of a monastery at a place known as *Awattaka* and the dedication of lands to the monks under the orders of a king or governor on a certain occasion. The upper portion of the stone containing the inscription has now been preserved in the office of the Superintendent, Archæological Survey, Burma, at Mandalay.

"Another *Burmese epigraph*, also of a fragmentary nature, was found *underneath the bed of a tank*, known as Sinbyugan, *at Hmawza* (Old Prome). The tank dried up during the hot weather. It was discovered in three small detached pieces by a cultivator while digging a well there. The letters are of the square type belonging to about the 12th-13th century A.D. The record itself is not of much value; it gives the names of slaves dedicated to a pagoda or a monastery. But here again the interest is in the language in which it was written. Old Prome was Pyu country, and all the records that have so far been discovered there and that have any pretension to antiquity are in Pyu, Pāli, Sanskrit and Môn, in the South and North Indian characters, but none in Burmese. The present epigraph was probably set up during the time of the occupation of Prome by a Burmese Governor in the 13th century A.D.

"While I was at Pegu in March last U KYAN, District Engineer, Pegu, kindly made over to me a small *inscribed stone slab* measuring nearly 17″×11″×2″. It was inscribed on both sides in Môn containing 29 lines in all, and was very well preserved. On examination it was found to be a duplicate of the one presented to Mons. DUROISELLE by a Pathan gentleman of Pegu and mentioned in para. 30, p. 15 of the *Report of the Superintendent, Archæological Survey, Burma, for the year 1920*. The purport of the present inscription is the same as that of Mons. DUROISELLE. Both record the repairs undertaken in 1470 A.D. to the seven pagodas on the same site at Pegu, which had fallen into ruin. The stone has now been preserved in the office of the Superintendent, Archæological Survey, Burma, Mandalay.

"The chief interest in these inscriptions lies in the fact that they refer to *King Tissa*, and his *queen Mahāsubhaddā*, who built the seven pagodas mentioned in those inscriptions. King Tissa was credited with heretical ideas, and it is said that he had a great leaning towards Hinduism. He was the seventeenth and the last of a line of kings beginning with Samala that reigned at Pegu. Various dates are assigned to him and to the kings preceding him, but according to a source which appears to be reliable, Tissa became king in 1043 A.D. and reigned for 14 years. Pegu became the headquarters of a Burmese governor at the end of that period, and was without a king for over 200 years.

"The remaining epigraphs were found *at Pagan.* They consist of two lithic records which were discovered in the course of excavations there. and three writings in ink on the walls of temples. The former give mostly the names of slaves and lands dedicated to pagodas. Among the latter the most interesting is *a bilingual record found on a wall* on both sides of the entrance to the sanctum of a temple, now known as Kya-zin Temple and situated in a field to the north-west of the Nagayon temple, *Myinpagan.* The writing is *Burmese* on one side *and Pāli* on the other. The former is still very clear but the latter has become very faint and could not be read properly. According to the Burmese inscription, the temple was founded by a person named *Baruchī* who died in the year 1125 A.D., a date which falls within the period assigned to *King Alaungsithu* (1112-1167 A.D.). Relics were enshrined in the same temple in 1217 A.D. by another person named Thin-tra-O (Santraaiul), and the temple itself was named *Nga-tre-lok-lu-boh-biul* in 1223 A.D. The last name was also noticed in the Pāli veision of the writing on the other side of the entrance. The names do not sound Burmese, and in the syllable *boh* in the last name the letter ḅ, peculiar to Môn, was used.

"The other *writings in ink* were found *on the walls of a temple* situated close to the east of the Abéyadana temple. One is dated in the year 1574-75 A.D., but there is no trace of any date in the other. The latter gives a brief account of *King Kyanzittha* (1084-1112 A.D.) and his chief queen before they ascended the throne, in connection with the story of a snake. Kyanzittha was in hiding and his wife who came to see him one day at his hiding-place was horrified to see his head being covered with the hood of a snake. She ran away through fright, and Kyanzittha seeing her running away enquired of her the. cause. She explained. and Kyanzittha told her that if it was a fact and if he would live long he would become a king. Then both made a vow to the effect that if that would come to pass they would perform meritorious works and build pagodas. That temple was. situated, as has been mentioned above, close to the east of the Abéyadana temple, and is only a few hundred yards from the Nagayon temple. The Nagayon was attributed to Kyanzittha, and Abéyadana to his queen. This epigraph though undated, belongs on palæographical grounds to the sixteenth century or about the same age as the other dated record, and the legend contained in it is thus the earliest version of that popular story extant.

"The other writing gives the names of persons who built the temple in which it was found, and contains a prayer.

"Besides the above, there were discovered, in the course of excavations at Pagan, short legends in Pāli, Sanskrit, Môn and Pyu on terra-cotta votive tablets belonging to the 11th-13th century A.D., and the more important of them have been already discussed under the head 'Exploration'."

Rajputana Museum, Ajmer.

Among the Museums, the Rajputana Museum copied eight new stone inscriptions and four copper-plates. The earliest *inscription* is engraved *on the pedestal*

of a Jaina image in the temple of Vāsupūjya at Udaipur and records that the image was set up in Saṁvat 1076 (=A.D. 1019) by a certain *Vāhila Soḍaka*. The earliest *copper-plate* is a fragmentary record of a *Paramāra king of Ābu*. It contains eleven verses and a portion of the twelfth, being part of the genealogy of the donor king whose name and other details are lost in the missing plate. The extant portion of the genealogy of the Paramāra rulers of Ābu from Utpalarāja to Dhārāvarsha supplies for the first time the names of some of the intermediate rulers, such as Dantivarman, Kākaladeva and Vikramasiṁha. The plate is in private possession at Rohera in the Sirohi State. Another interesting *inscription* is that *in the Śiva temple at Khamnor*, Udaipur State, dated 1307 V. S. (=A.D. 1250), and records the grant of 128 *drammas* for the worship of the God Someśvara from the *māṇḍavī* (custom house) of Khamnor. The donor was the *mahārājakumāra Prithvīsiṅgh* who may have been the son of Pūrṇapāla of Sisoda. An *inscription on a large slab* now removed to the Udaipur Museum belonging to the reign of *Rāṇā Mokala of Mewar* and dated 1487 V. S. (=A.D. 1430) refers to the construction of a well by the Brāhmaṇa Vidyadhāra who was the descendant of Śūrapāla of the Gauḍa family of Hariyāṇā. Another *inscription* engraved *on the pedestal of an image of Vāsudeva* in the Victoria Hall Museum at Udaipur records the setting of the image by *Mahārāja Kumbhakarṇa* at Vata on the 3rd of the bright half of Āśvina in V. S. 1516 (=A.D. 1459) and Śaka 1382. The difference between the Vikrama and the Śaka era in the month of Āśvina is in this case 134 and not 135, which indicates that in the reign of Rāṇā Kumbha the usage in Rajputana was similar to that of Gujarat in respect of the commencement of the year on the first day of the bright half of the month of Kārtika. The other inscription kept by the Rajputana Museum refers to a period later than the 15th century A.D.

Watson Museum at Rajkot.

The Curator of the Watson Museum of Antiquities, Rajkot, examined two copper-plate grants of the Valabhī dynasty. Of these the one sent by the Lathi State is very important, being *the only known grant of the Prince Kharagraha I* who is known as the *dūtaka* or issuing officer of several grants during the reign of his elder brother Śilāditya I. It is dated 297 Gupta era and records the grant of two fields, one of which was irrigated by a well, to a Brāhmaṇa of the village of *Chinchānaka*. The other is *a fragmentary plate found at Undavi* in Vala State and was probably issued by *Dharasena IV*, although the name of the king and the date, *etc.*, were in the latter portion which is missing.

Curzon Museum at Muttra.

In the Curzon Museum of Archæology at Muttra *two stone inscriptions and terra-cotta seals* were acquired. The legend on a small *Buddha statuette of the Kushāna period* reads *Mahārāja* which is rather unusual. That on a *clay seal* with five *aksharas* in early Brāhmī characters of about the 2nd century B.C. reads *Pavagutasa* (Sanskrit, *Parvaguptasa*). The legend on another terra-cotta reads *dinālaye* while the third apparently contains legends both in Brāhmī and Kharoshṭhī.

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MOSLEM INSCRIPTIONS 1931-32.

By Mr Ghulam Yazdani.

During the year under report thirty new inscriptions have been copied of which the most important are the following:—

(1) *Inscription of Aḥmad Shāh Walī Al-Baihmanī.*—This has been found buried under earth, below the floor of the Jami' Masjid, Gulbarga Fort. The inscription is interesting as it gives the exact date: 827 H. (1423 A.D.) of the building of the mosque which was not known even to Muḥammad Ṣāliḥ for in his history he writes that the mosque is some 200 years old. The style of writing of this record is *naskh* of a bold type similar to the Khaljī inscriptions of Delhi.

(2) *The Inscription of Sulṭān Ḥusain Shāh of Bengal.*—It is carved on a mosque at Margram in the Murshidabad District and gives the name Malik 'Aṭa *as that of the builder of the mosque. It also mentions the* name of Sulṭān Ḥusain Shāh of Bengal, and the date 904 H. (1490 A.D.). The inscription is interesting from an artistic point of view for it is written in a most beautiful *ṭughra* style. The impressions of this inscription have been sent by Mr G. C. CHANDRA, Superintendent, Archæological Survey, Eastern Circle, and the record will be published shortly.

(3) *The inscription of 'Alī 'Ādil Shāh of Bijāpur.*—This inscription has been found at the Yadgir Fort and it is interesting as it gives the date of the occupation of the Fort by the Bijapur King 'Alī 'Ādil Shāh I in 974 H. (1566 A.D.).

(4) *The Inscription of Ghiyāth-ud-Dīn Khaljī of Mālwā.*—The attention of the Government Epigraphist for Moslem Inscriptions was drawn to this inscription by the Director General of Archæology in India, who had been requested for a copy of the inscription by Mr A. MARCHIVE, M.A., Research Scholar, Allahabad University. The inscription is carved on a mosque at Raisen in Bhopal State and it records the construction of a Jami' Masjid during the reign of Ghiyāth-ud-Dīn Khaljī of Mālwā in the Hijrī year 995 (1586 A.D.). The inscription is in Persian verse consisting of eighteen couplets. The style of writing is *naskh* of an ornamental type.

The remaining inscriptions belong either to the tombs of Moslem saints or to mosques and public buildings erected by state officials. One of them is a land-grant written at the instance of the 'Great Khān Dilāwar Khān' during the reign of Ibrāhim Quṭb Shāh in 974 H. (1566 A.D.).

The Epigraphia Indo-Moslemica.

During the year a number of the *Epigraphia Indo-Moslemica* has been issued containing eight articles, three of which have been contributed by the Government Epigraphist for Moslem Inscriptions.

SUMMARY OF EPIGRAPHY DURING 1932-33.

By Dr N. P. Chakravarti.

The Vikramkhole Rock Inscription.

The oldest epigraph discovered in India during the year 1932-33 is the Rock Inscription at Vikramkhole in the Sambalpur district of Orissa. Evidently, it is of prehistoric origin. The script in which it is written is unknown though a number of the symbols found in it are similar in shape to some of the early Brāhmī *aksharas* and others have been compared with the signs found on the prehistoric seals of the Indus Valley civilization. Nothing, however, has been deciphered so far though conjectures regarding its contents have been made in some papers. It is likely that to understand this curious record we have to wait for a document which is written in this as well as some other known script. It is in any case incorrect to say that it consists of mere scratches and is not an inscription at all, for almost the whole record is incised with care and the symbols mostly look to be well-shaped letters. As will be seen by the accompanying photograph (Plate CXIX, *a*) some of them clearly resemble the Brāhmī *aksharas ma, to, ya, ga, ra* and *ja* in formation. Whether they represent the same sounds I can not say.[1]

The *Baigram copper-plate inscription* of the Gupta year 128 is another valuable document coming under the purview of this year. (Plate CXIX, *c*). It is a Sanskrit record of about the 5th century A.D., and is valuable in that it throws considerable light on the administrative system in force at the period in North Bengal.

The *Buddhist inscription from Kara* is another document requiring mention in this résumé. It is engraved on a thin, small triangular *plate of copper* which was discovered at Kara, a village in the Allahabad district of the United Provinces. It is written in the 'arrow-head' script, the origin and development of which are still under discussion. Possibly this script is identical with what ALBĒRŪNĪ called the *Bhaikshukī-lipi* and was adopted by the *Buddhist bhikshus* or monks. Very few records written in it have so far been recovered. The inscription under notice is similar to the one found at Gaya which BENDALL published long ago. No date is given in it, but on palæographical grounds the document may be assigned to about the 8th century A.D. It is a record of a gift (*deyadharma*) by the queen (*rājñī*) Chandalladevī, the devout *upāsikā* and wife of the illustrious *rāṇaka* Mahīpāla. The identity of these personages is not known.

[1] See my remarks on this inscription in *Latest Attempts to Read the Indus Script*, in *Indian Culture*, vol. I, p. 52. I am publishing herewith a clear rubbing of the 'inscription' (Plate CXIX, *a*) and Readers may decide themselves whether I was right when I wrote "I must certainly and firmly contradict the author's [*i.e.*, Mr JAYASWAL'S] assertion that 'the writing is in regular lines'. Rarely are more than three signs in any apparent succession, although one must admit that individual signs do resemble Brāhmī characters vaguely. It will be remembered that both the Mohenjo-daro inscriptions and the Brāhmī texts excel in the neatness of the line; indeed, few writings of ancient times can claim more beauty and perfection in execution than these two scripts. The Vikramkhole 'inscription' on the other hand is a topsy-turvy, haphazard collection of signs mixed with a few incised drawings."—It is not impossible that there was once an inscription on that rock; and that children or holidaymakers have almost entirely obliterated it by meaningless scratches. Not a single word can be pieced together, and the 'inscription', I feel certain, will never be deciphered.—*Editor.*

By far the most important epigraphical documents studied in the year are the *clay seals or sealings of Nālandā* which were recovered during the last sixteen or seventeen years but were left unexamined all this time. These seals are of a varied kind, and are being treated by Dr SASTRI in his *Memoir* on Nālandā. Only a few of them, therefore, may be mentioned here. The accompanying photograph (Plate CXX, *d*) will give an idea of the elaborate method in which some of the royal seals were tied to the documents sent along with them. They were probably fastened with strings, cloth or *tāḍī* leaves. Some of the seals show the impression of a cloth, and in one of them a piece of white *khādi*-cloth is still preserved. The smaller seals, mostly of the *mahāvihāra* of Nālandā show on their back the impression of *tāḍī*-leaf probably used for tying them on to documents. No document attached to these seals has yet been secured from the site and it is not known how they were actually fastened. The way the sealed letters were carried by messengers is learnt from the account given by BĀṆA in the *Harshacharita*: "Then he beheld the messenger entering as he was brought before him, his legs tired and heavy with the long journey, with his tunic girt up tightly by a mud-stained strip of cloth, the knot hanging loose and fastened up by a ragged clout swinging behind him, and having his head wrapped with a bundle of letters, which had a deep division pressed into it by a very thick thread that bound it". These seals are preserved in the Archæological Museum at Nālandā. One of them represents *Budhagupta*, another *Narasiṁhagupta*, the third his son *Kumāragupta*, and the fourth *Vainyagupta*. The seal of Kumāragupta would show that the name of his mother was *Mitradevī* and not Śrīmatīdevī or Lakshmīdevī as has hitherto been believed. Similarly, the name of the queen of Puragupta according to these seals was *Vainyadevī* and not Vatsadevī. This being the case, we shall have to rectify the reading of the Bhiṭarī seal as well as the genealogy adopted so far on the basis of it. The seal of Vainyagupta shows that he was an independent ruler, for he is styled a *mahārājādhirāja*. One of these seals represents a hitherto unknown king: *Bhagavachchandra*. The Prāgjyotisha seals in the collection supply the genealogy from Pushyavarman to Supratishṭhitavarman. Some of the Nālandā seals bear legends written in verse as do many of the Gupta coins. The execution of a number of these seals and symbols on them, particularly the animal figures, *e.g.*, the standing elephant and the seated bull in Plate CXX, *a* and *b* are executed with great skill and artistry. The letters too are incised very neatly and with a sense for beauty.

Besides the royal seals and tokens more than a dozen belong to *jānapadas* and clearly demonstrate that the word *jānapada* must be taken in the sense of a 'corporation' or 'corporate body'. A number of these tokens belong to different officials or offices.

Survey of Dravidian Epigraphy.

In the domain of Dravidian epigraphy twenty-two inscriptions were copied and studied in the year. Mr Lakshminarayan RAO, the Kanarese Assistant, was deputed to examine and copy them. They are all Kannaḍa records and

were secured in the Rāṇibennūr *tāluka* of the Dharwar District in the Bombay Karnātak. The earliest of them, engraved on a *stone slab* set up in front of the Rāmaliṅga temple *at Hūlihaḷḷi* is ascribable to about the 8th century after Christ. It refers to the rule of a Rāshṭrakūṭa king *Jagattuṅga.* As the epithet 'Jagattuṅga' was taken both by Govinda II and Govinda III, the record may be ascribed to the reign of either of them. The chief named Rājāditya spoken of in this record as governing the Banavāsi-12,000 province has not been met with before. Next in date is a Gutta record of the time of the Chāḷukya king *Vikramāditya VI* which was found in the Temple of Muktesvara at *Chauḍadāmpur.* It speaks of one Mallideva or Malla, a *mahāsāmantādhipati* of Vikramāditya VI and also of his vassal Attirāja of the Jaṭāchōḷa lineage. The *inscription of the time of Gutta III,* which was also secured from the same village, throws considerable light on the question of the pedigree of the Gutta dynasty which ruled the Guttavoḷala-*nāḍu* and also the Banavāsi-12,000 province occasionally. The genealogy given in this record is slightly different from the table drawn by the late Dr FLEET on the basis of the Haraḷahaḷḷi inscription. The Chauḍadāmpur inscription says that Vīra-Vikramāditya (II) had two sons. called Guttayya and Vikramāditya. The latter married Maiḷaladevī and got two sons from her: Vikrama and Gutta (III). According to the table given by FLEET the sons of Vikramāditya (II) were named Jōyidéva II and Vikramāditya III. A noteworthy *Yādava record* has also been found *at Chauḍadāmpur.* It mentions the cyclic year Khara as the 24th regnal year of the Yādava king *Rāmachandra* and would thereby show that this king commenced to rule in 1269 after Christ. The three documents, the Sorab, the Raṭṭehaḷḷi and the Kyāsanūr inscriptions, which were noticed by the late Dr FLEET, lead us to the same conclusion. In some of the records noticed by that scholar Mahādeva, the predecessor of Rāmachandra, figures as ruling in 1269 A.D. There are also inscriptions which show that 1271 A.D. was the initial year of Rāmachandra's reign. To reconcile this discrepancy Mr N. Lakshminarayan RAO suggests the possibility of both these chiefs ruling conjointly for some time, and he says that the custom of a conjoint rule was common in the Yādava family. All these interesting records will be published in the *South-Indian Inscriptions (Texts) Series* in due course.

Work done for Scholars outside the Department.

During the year under report several inscriptions had to be deciphered or reported upon to help outsiders interested in epigraphy, as well as for some of the members of the Archæological Department and the Archæological Commissioner of Ceylon. The record which requires special notice under this head is the *Haldipur copper-plate inscription of Gopāladeva;* a Pallava chief so far unknown to history. It is written in old Kannaḍa and appears to be the first of its kind to bring to light a family of the Pallava chiefs ruling on the western coast of India. The donor of the grant, was the *Pallavarāja Gopāladeva,* surnamed Vikramāditya Satyāsraya. The seal attached to this charter bears the emblem of a lion which, like the recumbent bull, was a *ketana* of the Pallavas. The inscription describes Gopāladeva as the son of Chaṇḍamahāsena and the lord of

Payvegundupura (modern Haigunda) in the Honāvar *tāluka* of the North Kanara district. The surname of this donor, Vikramāditya Satyāśraya, shows that he was a subordinate of the western Chāḷukyas of Bādāmi. Palæographically the record can be assigned to the 8th century after Christ.

Mention may be made here of a large *brick with an Assyrian inscription* on it which Mr W. V. DUKE, Principal, Ravenshaw College, Cuttack, Bihar and Orissa, has presented to the *Government Museum at Patna.* An eye copy of this record was given to me by Mr DUKE during my tour in Orissa. According to Mr E. SMITH of the British Museum who has deciphered it, the inscription belongs approximately to 1300 B.C. and purports to be a record of the *"Palace of Adad-nirari, King of Hosts, Son of Arik-den-ilu King of Assyria"*.

Publications.

Three parts of the *Epigraphia Indica*, parts vi and vii of volume XX, and part i of volume XXI were passed for final printing and issue. The *Annual Report on South Indian Epigraphy for 1929-30* compiled by Mr K. V. Subrahmanya AIYER, former Superintendent for Epigraphy, was issued during the year. As to the *South-Indian Inscriptions (Texts) Series*, volume VII has been sent to the press for final printing and issue, and the material for volume VIII of the series is in the course of preparation. The volume on the Bombay Karnātak inscriptions collected during the last six or seven years is also being prepared. The volumes on the Telugu and the Kanarese inscriptions in the Madras Presidency collected up to 1929 entrusted to outside scholars are nearing completion.

Epigraphical Work done by the Circles and in Museums.

Southern Circle.

The offg. Superintendent for Epigraphy, Southern Circle, reports as follows:—

"During the year under report 232 villages were visited and 361 stone inscriptions were copied in the Madras Presidency. In the Bombay Karnātak 105 villages were inspected and 190 inscriptions were copied. To this number we have to add 22 inscriptions copied by Mr N. Lakshminarayan RAO, from three villages in the Rāṇibennūr *tāluka* of the Dharwar district, as stated above. Besides these, nine copper-plates were also examined during the year.

"The earliest *copper-plate* of the collection is an odd plate of a *grant* issued by the Eastern Chāḷukya king *Vishṇuvardhana (III)* (A.D. 709-746), son of Maṅgi-Yuvarāja. The record ascribes to the latter the epithet *abhilashitakārya-Vijayasiddhi* while in other known records of this period he is given the title or surname *Vijayasiddhi.* The inscription registers a grant of land made by the king to the Brāhmaṇa Vṛiddhaśarman who was versed in three Vedas. A *copper-plate grant of the Vijayanagara king Achyuta* discovered this year is dated Śaka 1459 and records the gift of a village in the Chandragiri-rājya made by the king to a number of learned Brāhmaṇas, on the occasion of the *utthāna-dvādaśī.* It is noteworthy that this inscription belonging to the 16th century makes mention of the territorial division Jayaṅgoṇḍachōḷa-maṇḍalam which had its origin in Chōḷa times. *A grant* issued by the Tinnevelly Pāṇḍya king *Abhirāma*

Ativīrarāma Śrīvallabha which comes from the village of Kollankoṇḍān in the Ramnad district is dated in the 19th year of the king's reign which corresponds to the Śaka year 1503 (=A.D. 1581). Like the foregoing record this too registers the grant of a village as an *agrahāra* to several Brāhmaṇas. The gift was made by the king's cousin Abhirāma Sundareśa Varatuṅgarāma who has already figured as a joint donor with the king in his Pudukkoṭṭai grant of Śaka 1505 (=A.D. 1583). Incidentally the inscription refers to the donor's elder brother Guṇarāma who was probably dead at the time of the grant. *Five Telugu plates* secured from the Zamindar of Puṅganūr refer to the *Sugaṭūru chiefs* whose descendant the present Zamindar is. They belong to the last quarter of the 17th and to the 18th century A.D. Among these is a record of Śaka 1648 (=A.D. 1726) which registers the deed of agreement made by the chief *Immaḍi Chikkarāya Tammaya-Gaunayya* with the several communities, tenants, *etc.*, of the estate commuting the tobacco-rent (previously paid into his treasury in kind) into one of cash payment, and assessing the several villages of the estate in detail for the purpose.

"Among the *stone inscriptions* of the year coming from the Madras Presidency are a record of the time of the Pallava king *Mahendravarman III* of the last quarter of the 7th century A.D. and another of his younger contemporary *Vijaya-Nandivikramavarman*. The former is a label engraved on a slab at Conjeeveram and reading *Mahendravarmeśvaragriham*. The characters are of the ornate Pallava-Grantha type employed in a similar label engraved on a shrine near the Kailāsanātha temple at Conjeeveram. This shrine has been attributed to king Mahendravarman III, and it is not possible to say with certainty whether the newly discovered slab belongs to this shrine or to another built by the king.

"The inscription of the other king, Vijaya-Nandivikramavarman, comes from *Paiyanūr near Mahābalipuram* and is dated in the 37th year of the king. On account of the palæography of the record and the high regnal year the inscription must be assigned to Nandivarman II Pallavamalla. It registers the agreement made by the *gaṇa* of Payinūr for dredging the tank of the village annually, in lieu of the interest on the paddy given to them by a resident of Māmallapuram. This is the earliest known epigraphical mention of the village 'Māmallapuram'.

"Among the Pāṇḍya inscriptions discovered in the year are *records belonging to kings Māṟañjaḍaiyan, Saḍaiyamāṟan and Vīra-Pāṇḍya* 'who took the head of the Chōḷa'. Palæographically all these records may be assigned to the 10th century A.D. The first two of these monarchs may be identified respectively with Parantaka-Vīranārāyaṇa Saḍaiyan and his son Rājasiṁha III of the Larger Sinnamanūr Plates. Vīra-Pāṇḍya must be identical with the king of that name whose victim was Sundara-Chōḷa Parantaka II (Madras *Epigraphical Report* for 1926, p. 100) and who in his turn fell a victim to the Chōḷa king Āditya II Karikāla (Madras *Epigraphical Report* for 1921, p. 97, para. 30). An epigraph of this king mentions his subordinate Sennappi entitled '*Pāṇḍimārtāṇḍa Pallavaraiyan*'. It is possible to infer from the surname of this chief that his overlord Vīra-Pāṇḍya bore the title Pāṇḍimārtāṇḍa (Pāṇḍya-Mārtāṇḍa).

"A number of *inscriptions belonging to the Mediæval Pāṇḍya kings* have come to light in the village of *Peruṅguḷam* in the Tinnevelly district. Though this village is called only Peruṅguḷam in the inscriptions of Vīra-Pāṇḍya mentioned above, it acquires the surname Uttama-Pāṇḍyanallūr in the epigraphs of Jaṭāvarman Śrīvallabha of the 11th century A.D. and of subsequent kings. *Uttama-Pāṇḍya* must have been the title or surname of Śrīvallabha or one of his immediate predecessors.

"In *a record of* the 15th year of his reign *Māṛavarman Sundara-Pāṇḍya I* claims to have conquered Ceylon, Kaliṅga, the two Koṅgus and the town of Muḍikoṇḍaśoḷapuram and to have also taken the crowned head of the Chōḷa. This is the first instance in which the king lays claim to the conquests of Ceylon and of Kaliṅga. In an inscription of his 20th year found at Tinnevelly, the king is stated to have killed a certain Pararāja, and if this latter king was a Jaffna chief, as has been suggested by certain scholars, the event would seem to justify the king's claim to the conquest of Ceylon. The conquest of Kaliṅga is not borne out by other epigraphical evidence known so far.

"A certain Ponnerivarman figures in *a record* copied in 1929-30 at *Vaḷappur-nāḍu* in the Salem district which gives the regnal year 22. The same chief figures also in a record secured this year from *Tinnakkoṇam* in the Trichinopoly district. The palæography of this inscription justifies its assignment to the 10th century A.D. Neither of these records gives any clue to the dynasty of the chief. It has probably to be inferred that he was a semi-independent ruler of the borderland between the Trichinopoly and Salem districts.

"A minister of the Pāṇḍya king *Jaṭāvarman Sundara-Pāṇḍya*, by name Tirunelveli-Uḍaiyār is already known to us from an epigraph of this king found at Nandalūr in the Cuddapah district. In the present year's collection there is an inscription which states that this officer was the younger brother of *Vikrama-śoladeva*, a subordinate of the Pāṇḍya king. This chief Vikramaśoḷa has perhaps to be distinguished from his namesake of this period who is described as the brother-in-law of the two Pāṇḍya kings Māṛavarman Sundara-Pāṇḍya II and Māṛavarman Vikrama-Pāṇḍya (*Annual Report on South-Indian Epigraphy* for 1930, pp. 76*f*.).

"A *record of the Chōḷa king Kulottuṅga-Chōḷa II*, dated in his sixth year found at *Tirukkaḻukkuṇṟam* in the Chingleput district will show how a crime like murder was sometimes very lightly punished. It states that Vikramādittaṉ Kamban *alias* Vikramaśoḷa Periyaraiyaṉ surrounded one night the residence of Rāman Ambalakkūttaṉ, the general of Ediriliśoḷa-Śambuvarāya at Mukkāṭṭup-paṭṭi and killed him. The victim's wife thereupon committed *satī* with her husband, while his brother vowed vengeance against the murderer. But Śambuvarāya and the local elders interceded and persuaded the brother to forswear revenge on the condition that the miscreant agreed to burn two perpetual lamps in the local Śiva temple. This inscription appears to contain the earliest reference to the officer Ediriliśoḷa-Śambuvarāya who figures also in the Ārpākkam record of Rājādhirāja II belonging to A.D. 1168 (*South-Indian Inscriptions*, Volume VI, No. 456).

"A *fragmentary inscription* in characters of the time of Rājendra-Chōḷa I, *found at Ānūr* in the Chingleput district, registers the provision made by the *mahāsabha* of the village for the feeding *etc.* of teachers of the '20 chapters of the *Mīmāṁsa*' of the *Vedas*, the *Vṛitti*, the *Śāstras*, the *Pāṇinīyavyākaraṇa* and *Ālaṅkāra*.

"*In an epigraph of the 14th century A.D. coming from Pālūr* in the same district is recorded the provision made for a perpetual lamp in the local Śiva temple by a *pariah* servant (*paṟaiyaḍiyār*) of the headman of Tiruppālaiyūr.

"Among the inscriptions collected in the Bombay Karnātak a large number belong to the Western Chāḷukyas of Kalyāṇi and also to the Yādavas of Devagiri. The collection contains a few fragmentary records which are assignable either to the Chāḷukyas of Bādāmi or to the Rāshṭrakūṭas of Mālkhed. It has only one Hoysaḷa record of a Vīra-Ballāḷa found at Hāveri and seven epigraphs of the Vijayanagara kings.

"Palæographically the *earliest inscription* attributable to the period *of the Bādāmi Chāḷukyas* is on *a mutilated hero-stone at Devageri* in the Haveri *tāluka* of the Dharwar district. The king's name is lost though the title *prithvīvallabha* still remains.

"A *record of the Rāshṭrakūṭa king Jagattuṅga* in characters of the 8th century comes from Saṅgūr in the same *tāluka* and registers the death of one Rechagāvuṇḍa on the occasion of the destruction of the village Saṅgavūru, and refers to Dantiga as ruling over the district (*nāḍu*). In the absence of any dynastic appellation or personal title with reference to Dantiga it may be inferred that he was only a local chieftain. Jagattuṅga was the title of Govinda II as well as of Govinda III of the Rāshṭrakūṭa dynasty and the record is attributable to either of them in the absence of the date.

"An *undated record of Amoghavarsha I* speaks of *Irbbara*, a hitherto unknown subordinate of the king, as the governor of the Banavāsi province and his wife Goyindabbe as administering a village. The mention of *a Hindu lady as an administratrix of a village in the ninth century A.D.* is an interesting information supplied by this inscription. A *record of Kṛishṇa II* dated in Śaka 829 (=A.D. 907) mentions a new subordinate of this king, namely *Rājāti* (*Rājāditya*?) as enjoying the governorship of the Banavāsi province.

"From *Devihosūr* in the same *tāluka* comes a somewhat puzzling inscription which refers itself to the reign of *Vikramādityadeva* (a typically Chāḷukyan name or surname) who possesses the titles *akālavarshadeva* and *śrīprithvīvallabha*. The characters belong to the 10th century and the name *akālavarsha* warrants the ascription of the record either to *Rāshṭrakūṭa Kṛishṇa II or Kṛishṇa III*.

"An *epigraph discovered at Gadag* belongs to the reign of *Nityavarsha Nirupama-Vallaha* (Ballaha, *i.e.*, the Rāshṭrakūṭa king) and is dated Śaka 840. Both the monarchs Indra III and his successor Govinda IV are known to have borne the surname *nityavarsha* though neither of them is known to have possessed the epithet *nirupama*. The latest date known hitherto for the former is Śaka 838 (=A.D. 916-17) and if the present record belongs to him it would extend the period of his rule by two years. In any case the epithet *nirupama* occurs now

for the first time whether it be with reference to him or his successor whose earliest known date is Śaka 840 and this fact deserves to be noted.

"The inscriptions of the *Yādava period* copied this year are chiefly *hero-stones.* Most of them are from the villages of *Kaḷḷihāḷ and Sangūr* respectively called in inscriptions Ajjaḍi and Saṅgavūru or Changūr. The former is stated to have been attacked by one Pāṇḍyadeva during the reign of *Yādava Siṁhaṇa.* The latter appears to have been a place of importance from early times, for it was attacked both in the time of the Rāshṭrakūṭa king *Jagattuṅga* and the Yādava king Siṁhaṇa. The fort of Tiluvaḷḷi is stated to have been captured in the 10th year of Yādava *Rāmachandra* (A.D. 1291), evidently on behalf of the king. The discovery of so many *vīrakals* of this period in the country round about Haveri suggests that this tract was a much disputed land and the contending parties were the Hoysaḷas and the Yādavas.

"A number of these inscriptions record *saṁlehaṇa* or self-immolation of some Jains like Sakalachandradeva and the lady Mādavā.

"An inscription of the Gutta chief *Vīra-Vikramāditya II* dated Śaka 1155 (=A.D. 1233) is interesting in that it furnishes for him a very late date extending the period of his chiefship by 20 years.

"A *Vijayanagara inscription* dated Śaka 1329 (=A.D. 1407) *found at Sangūr* ascribes to *Devarāya I* all the well-known epithets of the Chāḷukya kings of Kalyāṇi including the attribute *satyāśrayakulatilaka*, and suggests that the traditions of the Chāḷukyan times did not die out in the Bombay Karnātak by the commencement of the 15th century A.D.

"A few *Kannaḍa records registering the gift of land* as *rakta-keyi*, *nettara-keyi* and *nettara-koḍage* have also come to light during the year. These correspond to the *udirappaṭṭi* gifts mentioned in Tamil epigraphs (*Annual Report on South-Indian Epigraphy* for 1929, p. 76), and embody grants of lands made in memory of heroes who shed their blood in fight.

"Of iconographical interest is an early *epigraph from Agaḍi* which is dated Śaka 700 and depicts in relief *the goddess Śriyādevī* (*Śrīdevī*) flanked on the proper right by *Saṅkhanidhi* and on the proper left by *Padmanidhi* whose names are carved below the respective sculptures in Chāḷukyan characters. The goddess is represented as sitting on a full-blown lotus with each of her two hands holding a lotus by its stalk. The personified *nidhis* are represented like males, in a seated posture, each holding in the right hand his particular emblem, *i.e.*, one the conch, and the other the lotus. This is probably the earliest known labelled representation of these subjects and deserves notice. Later epigraphical and traditional references to these *nidhis* are found in connection with the Śrīkūrmam temple (*Madras Epigraphical Report* for 1919, p. 8, and *South-Indian Inscriptions*, Vol. V, Nos. 1156, 1167, 1207 *etc.*)".

Burma Circle.

As to the epigraphical work done in the Burma Circle the report sent by the Superintendent shows that seven new inscriptions in all were discovered during the year. One of these *epigraphs* was found in a *Cave Temple at Kyaukse* at

the eastern end of the small range called Shwethalyaung Hill. Opposite to it is the site of the old Myinzaing, the capital town of one of the three Shan brothers after the downfall of the Pagan dynasty (*c.* 13th or 14th century A.D.). This inscription is incised on a marble slab in old Burmese. It is dated in Sakkarāj (the common Burmese era) 666 (=1304-05 A.D.), and records the endowment of lands by a certain minister, probably for the maintenance of the cave-temple in which it was found, during the reign of *Saṅghyā, Rājā and Sinkasu*, the three Shan brothers. The remaining inscriptions were found within the precincts of the *Shwezayan pagoda* at *Thaton*. The Superintendent divides them on palæographic grounds into two classes, *viz.*, those belonging to the 11th-12th century and those of the 14th-15th century A.D. The earlier ones are, he says, partly in Pāli and partly in Môn but the later ones appear to be all in Môn. They are all blurred on account of the bad preservation, and their decipherment has become very difficult. One of the earlier ones begins with a verse from the *Dhammapada* and the other contains the names of the past Buddhas beginning with Taṇhaṅkara. On palæographic grounds they would be the *earliest records yet discovered at Thaton*,—the Thaton of *Suvarṇabhūmi* fame.

Rajputana Museum, Ajmer.

From the report sent by the Superintendent it appears that twelve inscriptions were copied for the Rajputana Museum, Ajmer, during the year ending 31st March 1933. The earliest of these epigraphs is written on a *copper-plate* in characters similar to those of the Udaipur inscription of Aparājita which is dated Saṁvat 718 (=661 A.D.). It is a record of the grant of a village named Ubbaraka to a Brāhmaṇa Bhaṭṭināga of the Chandratreya-*gotra* by *Mahārāja Bhetti of Kishkindhā*. It is dated the 73rd year (probably Harsha year =679 A.D.) coupled with Āśvayuja-*saṁvatsara* of the 12-year cycle of Jupiter. The plate bears the sign manual of Mahārāja Bhetti and Bhaṭṭivāḍa and was engraved by Sāmbabhaṭa. The charter was issued from Camp, Trambapālī, the *dūtaka* being Yajñadatta. Out of the rest, six are ordinary *votive inscriptions* recording the consecration of certain *Jaina images*. In dates they range between the Vikrama years 1176 (=1119 A.D.) and 1662 (=1605 A.D.). The latest of these, dated in Saṁvat 1662, mentions *Jinachandra-sūri* the *āchārya*, who consecrated the image on whose pedestal it is incised, as a descendant of Jinamanikya-sūri of Kharataragachchha and was honoured by Akbar, the Mughal Emperor. *The inscription engraved on a slab found in the Samādhi* (cenotaph) *of Rāo Bīkā*, the founder of the Bikaner State, at Bikaner, is also noteworthy. "It is dated Monday the 5th day of the bright half of Āshāḍha, Saṁvat 1561, Śaka year 1426 (A.D. 1504) and records the death of Rāo Bīkā, who was the son of Jodha by Nauraṅgadevī. It further records that Rāo Bīkā at the command of his father and advice of his uncle left his paternal state, acquired a new kingdom for himself and founded the city of Vikramapur, the modern Bikaner."

Indian Museum, Calcutta.

On an image of Prajñāpāramitā, originally from North Bengal, purchased for the Indian Museum, occurs an interesting inscription of one line referring to

Dharma-Śrīpāla of Vanavāsi Karṇāṭaka. (Plate CXIX, *b*). The latter place is undoubtedly the modern Banavasi in the Sirsi *Tāluka* of the Karwar District. The migration of a Buddhist elder from the Karṇāṭaka to distant Bengal is noteworthy. Another inscription of the 12-13th century A.D. occurring on the pedestal on a Sūrya image from North Bengal, also added to the Indian Museum recently, refers to the donor as the illustrious Vaktra (?) Śivāchārya.

SUMMARY OF EPIGRAPHICAL WORK DURING 1933-34.

By Dr N. P. Chakravarti.

During the year under review several inscriptions were received from the Circle offices and outside scholars for decipherment, only three of which are interesting and deserve mention in this report. The earliest of these was discovered during the year 1932-33 in the *Maniyar Math* area at *Rajgir*, Patna district, to which reference has already been made *suprâ* in the Conservation Section. This inscription is written in the characters of the Kushāna period and, as reported by the Superintendent of the Central Circle, is engraved on the pedestal of a fragmentary seated stone image. Only two lines of the inscription are extant which are well preserved except the third letter of the second line which I am inclined to read as *ga*. Thus the reading would be:—

(1) *parvato Vipula*
(2) *rāja-gaṇikā.*

In all probability, this piece of sculpture was dedicated to a shrine existing on the *Vipula Hill*. Vipula as one of the five hills encircling the old city of Girivraja has been known from literature for a long time. The Chinese pilgrim Hiuen TSANG also mentions it by name, and places it to the west of the north gate of the old Rājagṛiha. But this is the first epigraphical record found to contain the name of this hill.

The Brāhmī Inscription of Rāmireḍḍipalli.

A fragmentary inscription in Brāhmī engraved on a *stone pillar* was copied by the Office of the Superintendent for Epigraphy. According to the report of the Tahsildar of Nandigāma who supplied the first information, the pillar was found buried *in a field at Rāmireḍḍipalli* in the Nandigāma *tāluka* of the Kṛishṇā district by a villager. This field is said to be about a furlong in distance from the foot of a hill on which some Buddhist remains were found by the Superintendent of the Southern Circle in 1926. The pillar was removed to the village temple by some people where it was used as a seat. The inscription is very badly damaged and little can be made of its contents. But there remains enough to show that the script is of the same type as that used in the inscriptions of the Southern Ikkhāku kings found at Jaggayyapeṭa in the Kṛishṇā district and at Nāgārjunikoṇḍa in the Guntur district of Madras. As far as can be made out, the inscription is dated in the sixth year of the Ikkhāku king *Māḍhari-puta Siri Virapurisadata*. The details of the date are completely destroyed but the letter *he* after the year shows that the pillar was set up in the *hemanta* season

of that year. The object of the record seems to be the erection of some pillars by a lady about whom nothing else is known. The sixth year of the reign of Virapurisadata must have been marked by a great activity in the renovation of Buddhist monuments in the neighbourhood, for we know from the date given in the *āyaka-pillar* inscriptions at Nāgārjunikoṇḍa that they also were erected in the rainy season of the same year. It is most likely that this pillar, like the *āyaka*-pillars at Nāgārjunikoṇḍa, was one of the several erected for the purpose of adorning the main monument of the site.

Palamau Fort Inscription.

A late Nāgarī inscription discovered in the *New Fort at Palamau* records the construction of that Fort on Wednesday, the fifth day of the dark half of Māgha in the Vikrama-Saṁvat 1690 by *Metanīndra*, the son of Ananta, grandson of Bhagavanta and great-grandson of Udavanta who belonged to the family of the Chyavana-*ṛishi*. The date, expressed both in figures and chronogram, is irregular but Metanīndra of the inscription is evidently identical with Medinī Rāī of the Chero dynasty and the ruler of Palamau and adjacent places. The period of Medinī Rāī's rule as given in the *Imperial Gazetteer of India* is from 1659 to 1672 A.D. But this inscription shows that he was already a ruler in 1633 A.D.

South-Indian Inscriptions.

Regarding the progress made in the collection of South Indian inscriptions in the Madras Presidency, the Superintendent for Epigraphy reports:

"During the year 1933-34 seventy-six villages were inspected and one hundred and seventy-seven inscriptions copied. Six copper-plate grants were also examined. Of these latter the earliest is a charter of the Pallava king *Siṁhavarman II* coming from the Nellore district. The set furnishes us for the first time a clear seal of the king. This bears the figure in relief of a couchant bull facing the proper left, and above it the figure of what looks like an anchor. It is dated in the tenth year of his reign and records the grant of a village to a certain Vishṇuśarman. Of the other copper-plate records one received from Dharwar purports to belong to the Western Chāḷukya king *Vinayāditya*, the son of Vikramāditya and the grandson of Vijayāditya who was the elder brother of Kīrttivarman and son of Pulakeśin, and is dated Śaka 520, Kālayukta (wrong). It states that when the king had gone to Kurunda for his coronation (*paṭṭa-bandha*) from his capital Raktāpura on the north bank of the Malāpahārī river, he made a gift of the village Hodalūr in the Bāgaḍige-Seventy division, in the Kūṇḍichha-Thousand *vishaya*, to a certain Keśava-Chauverabhaṭṭa of the Kannaḍānvaya. The irregular genealogy of the king, the late Nāgarī script of the inscription and the corrupt Sanskrit in which it is written and also the date given, which is nearly a century earlier than the king's time,—all these together raise a doubt about the genuineness of the record. A similar record of this king, dated in the same year has already been mentioned in the *Madras Epigraphical Report* for 1906, while another issued by him in Śaka 512 was noticed in the *Report* for 1918. In a long inscription of the time of the Vijayanagara king *Veṅkaṭapati II*, dated Śaka 1546, the Madura Nāyaka ruler

Tirumala-Nāyaka figures as a subordinate of the king. At his request some villages were granted to several learned Brāhmaṇas. Two Tamil grants received from Tanjore, dated Śaka 1656 and 1680 respectively, belong to the time of the Tanjore Mahārāshṭra rulers *Ekojī* and (his half-brother ?) *Pratāpasiṁha*, and record agreements made by the merchants of Tañjāvūr (Tanjore), *etc.*, to pay impost on all articles of merchandise brought for sale in the local market so as to provide for worship and offerings to the deity in the Koṅkaṇīśvara temple.

"Among the stone inscriptions copied during the year a *Vaṭṭeḻuttu inscription* of the 2nd year of *Vijaya-Narasiṁha-varman* copied at Veḷūr in the North Arcot district is important. The palæography of the inscription points to the latter part of the 8th century as the period of the record, and hence this Narasiṁhavarman appears to be different from the Pallava king Narasiṁha II. No clue as to his identity is available except for the provenance of his inscriptions so far found, *viz.*, Kīḻmuṭṭugūr in the Gudiyāttam *tāluka* of the North Arcot district and Baṅgavāḍi in the Kolar district; and the Western Gaṅga emblems (the elephant and the goose) found below one of his records. The overlordship over a Bāṇa chief exercized by Narasiṁhavarman is established by the present inscription which records the death in a cattle raid of a chief of Melveḷūr in Mīyakuṇṛa-*nāḍu*, who was a vassal of the Bāṇa. A chief of Tagaḍūr-*nāḍu* is already known to have acknowledged the overlordship of this king. An inscription coming from the Punganūr *tāluka* of the Chittoor district is of the time of Bāṇa-Vidyādhara *Jayameru-Bhūpa* ruling over the Vaḍugavaḻi Twelve-thousand and the Gaṅga Six-thousand, and refers to a cattle raid by a certain Mahārāja at Chemmagūr in which one Maṇikkameṇṭi lost his life rescuing the cattle from the enemy. Another attack on Chemmagūr by the same chief is recorded in two inscriptions of the time of the Rāshṭrakūṭa king *Kannaradeva* (Kṛishṇa II) from the same place. One of these states that when the Mahārāja attacked Māsarasa of Semmagūr, a servant of the latter fought on his behalf and lost his life. The other inscription states that on the occasion of an attack on the village by the Mahārāja, Māsarayya pierced his enemy with twenty (of his companions), and died in the attack. The troublous conditions of this part of the country in the ninth and tenth centuries A.D. is reflected in a record of a certain *Pallo* (*Pallava*)-*Arasa*. We learn from it that a certain Kōṇakki attacked Karaūr administered by the Vaidumba chief Stāte-arasa after spreading his army over the three *koṭṭas* and lifting the cattle from there, but was repulsed by the son of another Vaidumba chief named Sūrapa, governing Muttukūr, who thus secured victory for the king and himself; he was, however, unfortunately killed in the fight. The same unsettled conditions seem to have prevailed in the North Arcot district, judging from two *Tamil inscriptions at Veḷūr* (mentioned above), one of which is dated in the sixteenth year of *Rājakeśarivarman* (probably Sundara-Chōḷa), and the other a fragment of the same period. These record respectively the death of a servant of one Vāṇakovaraiyar in a cattle-raid, and of a certain Kāḷimaṉ while rescuing his brother's daughter from bandits.

"Two records copied this year in the *Punganūr tāluka* bring to light the names of some local chiefs ruling over parts of the *tāluka* such as Śakkideva-

Maṇḍalika and his son Varaguṇapperumāḷ *alias* Puḷḷadeva-Maṇḍalika, the *rājapatis* of Puda-*nāḍu* in Nigarilisoḷa-maṇḍalam. *Two inscriptions* copied at *Kuṭṭiyam* in the North Arcot district give some interesting information about the Śambuvarāya chiefs of the fourteenth century A.D. We learn that a servant of *Rājanārāyaṇaṇ Śambuvarāya*, also called Ponnāyaṉ or Ponniṉ Tambirāṉ and Udāraguṇarāmaṉ, received the village tax-free as a *gaṅgāgamanavṛitti* from the king's elder brother Mallināthaṉ for having carried to, and immersed in the Ganges the ashes of their father king Veṉṟumaṇkoṇḍāṉ, and performed his funeral obsequies at Gayā. He built a temple at the village in the name of the deceased king for which an endowment was made by Udāraguṇarāmaṉ in the third year of his reign. As we have records of both these brothers in the same period which quote each other's gifts, we may suppose that they either ruled conjointly or divided between themselves their father's kingdom after his demise.

"Mention may also be made of the discovery of a few *rock-cut caves and mounds* evidently of the Buddhist period at Korukoṇḍa near Rajahmundry, and the inspection of 52 Roman gold coins discovered at Nandyāl in the Kurnool district. This is the first known find of such early coins in this district though similar finds have already come to light in the neighbouring districts of Guntur, Nellore and Cuddapah."

Kanarese Inscriptions in the Bombay Presidency.

During the year under review the Junior Assistant in my office was sent to conduct the epigraphical survey of the Bijapur *tāluka*. He visited 66 villages and collected 60 inscriptions including those preserved in the Bijapur Museum. The staff in the office of the Superintendent for Epigraphy also inspected 103 villages and collected 120 inscriptions in the Bombay Karnātak.

The inscriptions copied by my office relate to almost all the dynasties that held sway over the Kanarese districts. According to the report of Mr N. Lakshminarayan RAO, who examined all these impressions, the earliest of them comes from *Kārjoḷ* and belongs to the reign of the *Rāshṭrakūṭa* king *Krishṇa III.* It is dated Śaka 879 (A.D. 957-58) and states that the king was then residing at Melpāḍi (the same as Melpāṭī of the Karhāḍ Plates of the same ruler) and which is to be identified with the modern Melpāḍi in the Chittoor district. From the same record we get the information that Tailapayya, *i.e.*, Taila II, the first king of the Chāḷukyas of Kalyāṇī was governing the *nāḍu* (district) probably Tarddevāḍi, where the inscription was found, as Kṛishṇa's subordinate. That Taila was an officer under Kṛishṇa III was already known from a record of A.D. 965 found at Narasalgi in the Bāgevāḍi *tāluka*; but the Kārjoḷ inscription furnishes an earlier date for this chief.

Next in point of time is *a record* of Śaka 915, Vijaya (A.D. 993) found at *Kākhaṇḍki* and belonging to the reign of *Taila II.* It gives the interesting information that this king was ruling from Mānyakheḍa (Malkhed), famous in earlier times as the capital of the *Rāshṭrakūṭas.* This confirms Dr FLEET's conjecture that Mānyakheṭa was, perhaps, for a time the capital of the Western Chāḷukyas of Kalyāṇī before it was shifted to Kalyāṇapura. The earliest mention of

Kalyāṇa as the capital of the Chāḷukyas is found in a record of A.D. 1033-34 already noticed in the report for 1929-30. Thus the date of the transfer of the seat of Government from Malkhed to Kalyāṇa must be placed sometime between A.D. 993 and 1033. Another inscription of the same ruler dated Śaka 918 (A.D. 996) mentions *Perggaḍe*[Kaḷā]*payya* as an officer of the *mahāsāmantādhipati* Daśavarmmadeva. This Daśavarmmadeva, whom the record describes as 'a Bee at the Lotus Feet' of Bhuvanaikamalla-Āhavamalla and as Taila's *chakra*, is the son of Taila II and the younger brother of Iṛivabeḍeṅga-Satyāśraya, the successor of Taila. Though almost all the Chāḷukya records from the time of Vikramāditya V onwards which give the genealogy of the family mention Daśavarman, this is the first known inscription of his time. Further, in this epigraph Taila II is for the first time given the epithet of *Bhuvanaikamalla*. It may be noticed in passing that in the report for 1926-27 an inscription of this family was mentioned wherein Iṛivabeḍeṅga-Satyāśraya is given the title of Āhavamalla which is usually associated with his father. Another epigraph (B. K. 64 of 1926-27) shows that Taila III who is generally known by the *biruda* or *Trailokyamalla* was also called *Tribhuvanamalla*. It is thus apparent that these titles were not peculiar to particular rulers of the family but were of a general nature and could be borne by any member of the family. An inscription of Bhuvanaikamalla *Someśvara II* found at *Honwāḍ* which bears the date Śaka 995, Pramādin (A.D. 1073), supplies us with the information that the *mahāsāmantādhipati mahāprachaṇḍa-daṇḍanāyaka* Bhāskarabhaṭṭopādhyāya who is described as the *ārādhya* of the king was administering the *agrahāra* of Ponnavāḍa. From an earlier grant of the time of Someśvara I recorded on the same stone as well as from another inscription found in the same village (*Ind. Ant.*, Vol. XIX, p. 272) we learn that in Śaka 976 and 984 this place was being administered by *Ketaladevī*, the Senior Queen of Someśvara I. Probably after her death Bhāskarabhaṭṭa was appointed to govern the village according to *tribhogābhyantarasiddhi*. It may also be noted that Bhāskarabhaṭṭa is here described as the 'Lion to the Elephant Calves', namely: the Chōḷa *sāmantas* headed by *Vāṇarāya*. This would show that this *daṇḍanāyaka* had taken part in at least one of the several battles between the Chōḷas and the Chāḷukyas waged during this period.

This year's collection also contains a large number of inscriptions of the reign of *Vikramāditya VI*. At *Kaṇṇūr* there is an inscription of the 37th year of the Chāḷukya-Vikrama era (A.D. 1112) which registers a grant of land to the Jaina temple of Pārśvanātha at *Kannavurī* (modern Kaṇṇūr) by Kālidāsa-Daṇḍanātha, a Brāhmaṇa officer of Vikramāditya. Incidentally it mentions three Jaina teachers of Konda(Kunda)kund-*ānvaya*, Mūla-*saṅgha*, Deśi-*gaṇa* and Pustaka-*gachchha*, *viz.*, Varddhamāna-muni, his disciple Bālachandra-vratin and the latter's disciple Arhaṇandi-Beṭṭadadeva. Two inscriptions of the *yuvarāja Mallikārjunadeva* were secured during the year. One of them which is at *Niḍoṇī*, is dated in the Chāḷukya-Vikrama year 40, and states that the prince was governing the Tarddevāḍi-Thousand district. The latest date for him discovered hitherto was the Chālukya-Vikrama year 35 (*Ep. Ind.*, Vol. XV, p. 29); the Niḍoṇi record thus extends his period by five years. The other inscription of this prince is in

the Bijapur Museum and has already been noticed by Dr FLEET (*Ind. Ant.*, Vol. X, p. 127). It introduces to us for the first time a Brāhmaṇa subordinate of the *yuvarāja*, named Bhāyilachamūpa whose genealogy it gives. It is also of literary value as it is written in elegant Kanarese verse. Another inscription of the time of Vikramāditya in the Museum dated Śaka 1043 (A.D. 1121) is in Sanskrit and gives the genealogy of the famous general Govindachamūpa. We learn from this inscription that Lakshamarasa-Daṇḍanāyaka or Lakkarasa, who was the governor of the Beḷvola and Purigeṟe districts and was also for a time in charge of the Telugu country, was the elder brother of Govinda. Lakkarasa is described in a Huli inscription as the *aḷiya* of the *Mahāpradhāna* Anantapālarasa. The Kanarese expression *aḷiya* used here must be taken to mean nephew and not son-in-law, as understood by Dr BARNETT (*Ep. Ind.*, Vol. XVIII, p. 189), for the Bijapur Museum record informs us that Lakshmaṇa was Anantapāla's sister's son. On the same slab as the above is a Kanarese epigraph which registers a gift of 25 *gadyāṇas* by Govindarasa for feeding the assembly of *Āndhradaṇḍa*. *Āndhradaṇḍa* was probably a tax levied to meet the expenses of Vikramāditya's campaigns in the Āndhradeśa but the exact duties of the assembly are not known. One of *pratāpa-chakravartī-Jagadekamalla's* inscriptions in the Museum is dated in the 13th year of his reign, the cyclic year Śukla (A.D. 1149), and states that the *mahāmaṇḍaleśvara* Perma was governing the districts of Kisukāḍu-Seventy, Bāgaḍage-Seventy, Keḷavāḍi-Three-hundred and Nareyangal-Twelve. Though the name of this chief's family is lost in the inscription, he can be safely identified with the Sinda prince *Perma* or *Permāḍi I*, for the territory over which he was ruling was the hereditary fief of the Sindas and was held by this same prince five years before. If this identification is correct, this record gives a second date for Perma, his only other date known being A.D. 1174. *Chāḷukya-chakravartī-Tribhuvanamalla-Someśvara IV*, the last king of the line is represented by one inscription in the same Museum. It is dated Śaka 1106, Krodhin (A.D. 1184), which is also stated to be the third year of his reign. A hitherto unknown Yādava subordinate who bore the name Gomarasa is here stated to have made a gift of the village Gauḍageṟeyahaḷḷi to a temple.

Only one record of the Kalachuryas is of some interest. It belongs to the reign of Rāyamurāri-*Someśvaradeva* and is dated in the cyclic year Vijaya (A.D. 1173). The *mahāmaṇḍaleśvara Kaṁkheyadeva* who was the governor of Tarrdevāḍi and Ghaṭeyama-Sāhaṇi, another officer who made a gift of land to the temple of Mūlasthānadeva at Tamba, figure in this record for the first time.

Though it is known from the Sangamner copper-plate grant of A.D. 1000 (*Ep. Ind.*, Vol. II, p. 218) that Sevuṇachandra, the first historical prince of the Yādava family named both his territory and people after him, the earliest mention of the family by the name *Sevuṇa* was found in a record of A.D. 1191 (*Ep. Ind.*, Vol. III, p. 217). Now an inscription of Śaka 963, Vishu (A.D. 1041), in the Museum speaks of the Seguṇa-*vaṁśa*. Seguṇa occurring here is no doubt a variant of Sevuṇa. The chief Gommarasa, whose daughter Boḷḷabbe is stated to have made a gift to a temple, was probably a scion of this family, for he has requested the kings of the Seguṇa family that might rule thereafter to protect the charity.

He seems to have been a subordinate of the Chāḷukyas of Kalyāṇī though the inscription does not refer itself to the reign of any king. An inscription of the first Yādava king *Bhillama* which is dated in the fourth year of his reign, Saumya (A.D. 1189), acquaints us with a hitherto unknown officer of this king. He was the *mahāpradhāna* Vaijarasa-Daṇḍanāyaka and is stated to have made a gift of land to the temple of Boppeśvara at Tamba.

With regard to the work done in the Bombay Karnātak by the Madras Office, the Superintendent for Epigraphy reports as follows:—

"Of the collection from the Bombay Karnātak the earliest record is an inscription from *Siruguppi* in the Hubli *tāluka* of the Dharwar district. It is engraved in characters of about the seventh century A.D. It mentions two local chiefs Rāṇasatti and Kundasatti. The suffix *satti* (*śakti*) applied to their names points to their being members of the Sendraka family which was subordinate to the Chāḷukyas in this period, and it is possible that Kundasatti is identical with the chief of that name already figuring in an inscription of Pulakeśin II as the father of Durgaśakti. An inscription of *Vijayāditya-Bhaṭāra* coming from Bannikop in the Shiggaon *tāluka* of the same district refers to the village Banniyūr as being under the administration of the local *mahājanas*.

"The surnames *Nityavarsha* and *Nirupama* which are known to have been borne by the Rāshṭrakūṭa king Indra III from a record recently copied at Gadag, also occur in an inscription of this year's collection from the Haveri *tāluka*. It is dated Saka 850 which falls in the reign of his successor Govinda IV. We have therefore to suppose that Govinda also bore the same titles.

"Another inscription from the same *tāluka*, which belongs to the time of the Gutta king *Joyideva I*, is dated in the Chāḷukya-Vikrama year 102 corresponding to A.D. 1178. This record furnishes the latest known instance of the use of the Chāḷukya-Vikrama era in inscriptions."

Publications:

The Epigraphia Indica.

During the year under review printing order was given for three parts of the *Epigraphia Indica.* Of these two were edited by Dr Hirananda SASTRI and one by Mr K. N. DIKSHIT who officiated as Government Epigraphist during the absence on leave of Dr SASTRI. Part viii of Volume XX contains, besides the Index to the Volume and two other articles, a contribution by the late Rai Bahadur HIRALAL on the *Four Chandella Copper-plates* which were obtained by the Director General of Archæology from the Ruling Chief of the Charkhari State. Part ii of Volume XXI contains the concluding portion of an article continued from part i of the same volume and six other complete articles. These have been contributed by eminent scholars, both Indian and Western, such as Dr Sten KONOW, Prof. J. Ph. VOGEL, Dr Hirananda SASTRI, Prof. D. R. BHANDARKAR, Rai Bahadur HIRALAL and Prof. R. BASAK. But as the important items of information given in most of these inscriptions have already been summarized in the last year's report they need not be dilated upon once again. Part iii has also six complete articles and a portion of a seventh. Mr N. G. MAJUMDAR

has published the *Nālandā Inscription of Vipulaśrīmitra* of which already mention was made *suprâ* in the present volume. Mr DIKSHIT in an editorial note says that the Buddhist shrine of about the 11th-12th century A.D. which has been brought to light during the excavations at the Satyapīr Bhīṭā near the large monastery of Paharpur is probably the *Temple of Tārā* mentioned in this inscription as being built (or better: re-built) by Vipulaśrīmitra at *Somapura*. Mr DIKSHIT has himself published an article on a fragmentary *copper-plate* of the time of the *mahārāja Hastin* of the *nṛipati*-Parivrājaka family. The record is dated in the Gupta year 198 which must be considered as the last date of Hastin as his son and successor Saṁkshobha issued the Betūl grant in the Gupta year 199. The editor has shown in this connexion that the date of the Uchchakalpa kings cannot be referred to the Kalachuri era as originally proposed by KIELHORN and FLEET and lately upheld by Prof. D. R. BHANDARKAR. Prof. ALTEKAR has also edited here for the first time the *Surat Plates of Karkkarāja-Suvarṇṇavarsha* of the Gujarāt Rāshṭrakūṭa branch. The grant is dated Śaka 743 elapsed (821 A.D.) and records the gift of a field to a Jain establishment at *Nāgasārikā* which the Professor has identified with modern *Nausārī*. He has discussed in detail all the historical problems connected with this inscription. Verse 25 of this record, which does not occur in other inscriptions, so far published, contains the important information of Dhruva's victories over the Western Gaṅgas. Mr Subrahmanya AIYER has edited the *Tiruchchendūr Inscription of the Pāṇḍya king Varaguṇa-Mahārāja*. This inscription does not bear any date but from internal evidence Mr AIYER has come to the conclusion that it must be referred to Varaguṇa II. This inscription is also interesting for determining the relative values of money, weights and measures current in South India, and furnishes reliable data for the reconstruction of the economic conditions in that area during the 9th century A.D.

The South-Indian Inscriptions.

Volume VII of the *South-Indian Inscriptions* (*Texts*) *Series*, for which printing order was given last year, was issued during this year. Altogether 1,048 records collected during the years 1900 to 1902 have been recorded in this volume. More than half of these are written in Tāmiḻ, Grantha and Vaṭṭeḻuttu characters, the rest being in Kannaḍa, Telugu and Nāgarī, and one in Persian letters. The Chōḷa inscriptions which form a major portion of the Tāmiḻ records, represent almost all the kings of the Vijayālaya line, and in addition to other interesting facts give us an idea of the military exploits and details of administration of the period. The Pāṇḍya records mostly belong to the later rulers of the dynasty. Among Pallava records one belonging to Nṛipatuṅga furnishes astronomical details valuable for determining the year of his accession as A.D. 845. Of the Kannaḍa inscriptions those from South Kanara show that in early times this part of the country was first under the Āḷupas and then passed on to the Hoysaḷas. During the time of the Vijayanagara rulers it was under the control of their governors in charge of Bārakūru and Maṅgalūru-rājyas.

Regarding volume VIII of the same series the Superintendent for Epigraphy reports that the material for the whole volume had been sent to the press and the

second proof of 300 pages received. This volume includes the inscriptions copied till 1903. The next volume, material for which is being got ready, will contain the inscriptions of the Early Chōḷas, the Pallavas and the Pāṇḍyas arranged in chronological order. Fair progress has also been made with the volume on inscriptions from the Bombay Karnātak.

Of the volumes on Kanarese and Telugu inscriptions entrusted to the two scholars outside the Department, 1,108 pages of manuscript of the Kanarese inscriptions were sent to the press and 140 pages of proofs, covering 393 pages of the manuscript received. Good progress was also made in the preparation of the material for the volume of Telugu inscriptions. The *Annual Report on South Indian Epigraphy* for 1930-31 was duly issued during the year.

Epigraphical Work done in the Archæological Circles and certain Museums.

In the Northern Circle altogether three inscriptions were copied of which two are in Iranian and are therefore not included in this report. The third is a fragmentary inscription in Nāgarī characters and is of no historical interest. In the Western Circle Dr M. NAZIM, Assistant Superintendent of Archæology, took estampages of 99 inscriptions at Ahmednagar, Surat, Broach, Junnar, *etc.*, of which only one is in Balbodh script and the rest in Iranian. These estampages were taken in connexion with Dr NAZIM's monograph on Iranian and Arabic inscriptions at Bijapur.

The Central Circle.

In the Central Circle 28 inscriptions were copied at Nālandā, Rajgir and Palamau. Of the 18 inscriptions discovered at Nālandā as many as 17 are found on images and all except two consist of the Buddhist Creed. Of these two which preserve the names of the donors in addition, one records the meritorious gift of one *Veri* and the other that of *Dharmākaraśānti*, a monk from Kashmīra. The other is a clay seal with the legend *gayā-vishayasya* stamped on it. Of the 9 inscriptions copied at Rajgir one comes from the Sonbhandar and eight from the freshly discovered Vaishṇava Cave. The inscription in the Sonbhandar Cave consists of several symbols and two letters in Brāhmī, the import of which is not clear. The *Vaishṇava Cave inscriptions* are written partly in shell characters, and a few fragmentary inscriptions in the characters of the Gupta period. The inscription from Palamau is a late Nāgarī record dated Saṁvat 1703 Āshāḍha *va di* 13, Wednesday, and records the digging of a well.

Burma Circle.

The Superintendent, Burma Circle, reports the discovery of ten new inscriptions during the year 1933-34. "The oldest of them" writes the officer "is a small fragment measuring about 9″×7½″. It is in Pyu belonging to about the 9th-10th century A.D. It was found at *Halin*, once the Home of Pyus, and was kindly sent to me by U CHEIK, the old Headman of Halin. It contains only two lines with seven *aksharas*. The first line contains a name, probably that of a queen, which may be read:

Jatradevī u bi x x, and which may mean 'of Chandradevī'.

The fragment probably belonged to a tombstone. The name *Jatra* appears in another Pyu inscription which was also found at Halin in 1929-30 where the reading is *Mahādevī-Śrī Jatra*. Another *fragment* which if complete would be *one of the most important records* found in Burma was discovered at *Myinpagan*, near Pagan, by the roadside, by some coolies while digging a drain. It measures about $9\frac{1}{2}'' \times 6\frac{1}{4}''$, and is apparently a piece broken off from a corner of a four-sided stone column of fairly large size. The language is old Môn, but on account of its fragmentary nature it has not been possible to make a translation of it. Palæographically it may belong to King *Kyanzittha's* time (1084-1112 A.D.). The stone has now been preserved in the Archæological Office, Mandalay.

"While removing the *débris* from an old ruined pagoda at *Yegyi-Yenauk*, a suburb of Bassein town, a local monk and certain elders found an inscribed slab of stone close to a relic chamber of the pagoda. It is in Môn and records the dedication of bronze images of the Buddha by three villages and is dated in the Common Era 886 (1524 A.D.). At *Payagyi* village, a few miles to the east of Yegyi-Yenauk, *an inscribed slab of stone* was found in the possession of one Maung MYA. There were originally three fragments, one of which is completely obliterated, the rest being partly readable. The language is old Burmese, and from the type of letters the record belongs to about the 12th-13th century A.D. The first and legible portion gives a list of slaves, male and female, dedicated to a pagoda by a *Saṅkrī*, and the last portion probably contains imprecations and benedictions. The contents are of no outstanding historical value, but from the language and script it may be inferred that there was a Burmese settlement in the middle of the old Môn country in Lower Burma about the 12th-13th century A.D., a fact which is fully supported by Burmese Chronicles. Three more inscriptions were found in the Bassein district, and they all belong to *Dègôn*, a village about three hours journey by a ferry-boat from Bassein. Two are in *Pāli* containing extracts from the *Abhidharma*, and one in *Môn*. The last contains only a portion of a legend incised probably round a pedestal. It gives a date in the Common Era, which is equivalent to 1688-89 A.D., and the name of the donor."

About the remaining two inscriptions discovered during the year, the Superintendent reports:

"In the *Kalyāṇī Sīmā* compound situated close to the Shwezayan pagoda was found another *inscribed slab*. (See the summary for 1932-33, *suprâ*.) Unfortunately, it is also in a damaged condition, and only the lower portion of it has been preserved. The record is in Môn, and as far as it can be read, it commemorates the repairs undertaken to the old Sīmā, which probably had fallen into ruins, by a certain monk. It is not dated, but on palæographical grounds it may be placed in the 11th-12th century A.D. Mr G. H. LUCE, M.A., I.E.S., Reader in Far Eastern History, University College, Rangoon, kindly brought to my notice the discovery, by one of his pupils, of an inscription at the Singyo-Shwegu pagoda, *Amarapura*. It was here that the epigraphs published in the *Original Inscriptions collected by King Bodawpaya in Upper Burma* were originally found. They were discovered by the late Mr Taw Sein Ko in 1906. The inscription in question does not find a place in that publication, except a lower portion

of it belonging to a detached fragment (p. 547). It was apparently broken in two pieces, and the upper portion which contains the greater part of the record, was not found then. The latter contains two dates: 718 and 758 of the Common Era. It is connected with the dedication of lands to a pagoda erected by Nga Pyi Thin (Ńa-praññ-sañ) in the time of King *Kyawzwa* (probably King Kyawzwa-Ngè of Pinya, 1350-1359 A.D.)."

Regarding the *publication of Môn inscriptions* found in Burma, the Superintendent informs me that the study of the six Môn inscriptions undertaken by Dr C. O. BLAGDEN of the School of Oriental Studies, London, has now been completed and the result of his work will soon be published.

The inscriptions studied by Dr BLAGDEN are, (1) An inscription of the Aja-pāla Pagoda, Pegu; (2) an inscription of the Shwegugyi Pagoda, Pegu; (3) an inscription of the Shwedagon Pagoda, Rangoon; (4) an inscription of the Yathemyo Monastery, Pegu; (5) an inscription of the Kyak Pan Pagoda, Pegu, and (6) an inscription of the Gaungzegyun Pagoda, Pegu.

The Curzon Museum, Muttra.

One *inscribed red-sandstone pedestal* was acquired for the Muttra Museum. Fragments of a Buddha image in the *bhūmisparśa-mudrā* are seen on the pedestal. Both the upper and the lower rims of the pedestal are inscribed but the inscription in the latter is much damaged. The characters are of the *Kushāna period*, and the inscription seems to record the gift of a seat or pedestal (? *sada*) by *the nun Buddhadāsī* on the 23rd day of the fourth month of the rainy season of the eighth year, evidently of the Kushāna era and is to be relegated to the time of Kanishka.

The Watson Museum of Antiquities, Rajkot.

Two new copper-plates were acquired for the Museum. One of them is *the missing first plate of the Virdi grant of Kharagraha I*, the second plate of which was already discovered in 1932. This charter is now complete. Its importance lies in the fact that this is the first known grant of Kharagraha I, and that it was issued from the victorious camp at Ujjayinī. All other known grants of the Valabhī kings are issued either from Valabhī or from some other places in Gujarāt and Kathiāwāṛ. The inscription is dated in the twelfth day of the bright half of Vaiśākha of the Gupta-Valabhī year 297 (A.D. 616-17). So far we had reason to believe that a part of the Mālava territory was under the Valabhī rulers in the second quarter of the seventh century A.D. Two inscriptions of the Gupta-Valabhī years 320 and 321 issued by Dhruvasena II record grants of land in the Mālava territory. Now the present inscription shows that already in the Gupta-Valabhī year 297, at the time of Kharagraha I, Ujjain had come under the Valabhī rulers. It may be assumed that they came into possession of a part of this territory even at an earlier time. According to Hiuen TSANG who was in India during 629-645 A.D., the ruling sovereign of Valabhī, when he visited the place was *Tu-lo-p'o-po-t'a* or Dhruvabhaṭa whom he describes as a nephew of Śīlāditya the former king of Mālava and a son-in-law of the Śīlāditya reigning at Kanyakubja.

This ruler of Mālava is probably to be identified with Śīlāditya I, the elder brother of Kharagraha I. If this conjecture is correct, it will show that Mālava was associated with the Valabhī rulers even at the time of Śīlāditya I. Probably they were the Sāmanta rulers of the western part of Mālava. The second of the two inscriptions referred to above consists of the *first plate only of a grant of Dharasena II* of the same dynasty which was discovered at *Pithadia*. The second plate of this charter which contained the date and details of the grant is not yet forthcoming.

The Curator also informs me that *another grant of Kharagraha I* was found at *Amreli*. It was issued from Valabhī in the month of Śrāvana of the Gupta-Valabhī year 297 and is thus later by about three months than the Virdi grant.

The Prince of Wales Museum of Western India.

The Curator of the Archæological Section of the above Museum reports the acquisition of three brass images of Jaina *tīrthaṅkaras* bearing Sanskrit inscriptions and recording the name of the image, that of its donee and the year in which the gift was made. The earliest of them is dated Saṁvat 1525 Māgha *śu. di.* 5 Wednesday. The date, according to S. K. PILLAI's *Indian Ephemeris*, is to be regarded as irregular.

The Dacca Museum.

The Curator reports that the *Gunaighar plate of Vainyagupta* was acquired for the Museum during the year. This record has already been edited in the *Indian Historical Quarterly* for 1930. The name of this ruler has been found on clay seals discovered at Nālandā and occurs on coins where he also bears the surname of Dvādaśāditya.

SUMMARY OF MUSLIM EPIGRAPHY FOR 1932-33 AND 1933-34.

By Mr G. Yazdani.

During the period under report two numbers of the *Epigraphia Indo-Moslemica*, that is for the years 1931-32 and 1933-34, have been compiled and will be issued shortly. These two numbers contain fourteen articles; seven of which have been contributed by the Government Epigraphist for Persian and Arabic Inscriptions, four by the officers of the Archæological Survey of India, and three by other scholars. The inscriptions dealt with in these articles range in date from the time of Muḥammad bin Tughlaq, in the first half of the fourteenth century A.D., to the reign of Aurangzeb the beginning of eighteenth century, and geographically they are spread over almost the entire length and breadth of India, from the Murshidabad District (Bengal) in the east. to the Margalla Pass, Rawalpindi District in the north-west, and the Raichur District in the south.

From the historical point of view a large number of these inscriptions are interesting. The inscription of Muḥammad bin Tughlaq found at Gogi, Gulbargah District, shows the extent of his conquests in the western part of the Deccan, which fact was not clearly traced so far with the help of contemporary historical books. This inscription records the building of a fort. called *Ustādābād*

with lofty towers and gateways in 738 H. (1338 A.D.). As at Gogi itself there is no fort and the nearest is at Shāhpūr, it is possible that Muḥammad Tughlaq might have given a new name, Ustādābād, to the latter place in preference to its old Hindu name. The name Ustādābād, however, did not survive, for it is not mentioned in any contemporary history or statistical account, and was apparently replaced by the name Shāhpūr during the reign of the Baihmanī kings.

Another *inscription found at Sagar* (Gulbargah District) is important as showing that the Baihmanī kings had descended from the Īrānian king Baihman, although the view of FIRISHTAH is different on this point. He writes,

> "It has been asserted that he ('Alā'ud-dīn) was descended from Bahman, one of the ancient kings of Īrān, and I, the author, have even seen a pedigree of him so derived in the Royal Library of Ahmadnagar; but it was probably only framed after his accession to the throne by flatterers and poets, for I believe his origin was too obscure to admit of its being traced. The appellation of Bahmanī he certainly took out of compliment to his master Gangū, the Brāhmin, a word often pronounced Bahman. The king himself was by birth an Afghān."

The title Baihman Shāh is mentioned in the Gulbargah mosque inscription and it is also found on the coins of the dynasty. It was apparently the most appropriate appellation which the courtiers of 'Alā'ud-dīn could suggest for him, taking into consideration the king's sense of gratitude to the Brāhmaṇa Gangū, and the identity of the Iranized form Bahman, of the caste-name Brāhmaṇa, with the name of the great Īrānian king Baihman, son of Isfandiyār. In Gulbargah there is to this day, a street called Bahmanīpura, where the majority of the residents are Brāhmaṇas and some of them describe themselves as the descendants of Gangū.

Another inscription found at Sagar is important, for it mentions the name of the Baihmanī king, Walīu'llāh, son of Maḥmūd Shāh, as that of the reigning monarch in the year 932 H. FIRISHTA gives the period of Walīu'llāh's reign from 929 to 932 H., but Sir Wolseley HAIG in the *Cambridge History of India* (Vol. III, p. 702) has assumed that this king reigned from 928 to 931 H. As Sir Wolseley HAIG has given no reasons for his differing from FIRISHTA, and as the date given in the Sagar inscription supports the chronology given by the latter writer, the statement in the *C.H.I.* should be corrected accordingly.

Some inscriptions of Bengal, included in the number for 1933-34, are interesting for the chronology of the Sulṭāns of that province, but the chief interest of these records lies in their beautiful calligraphy which generally represents the *ṭughra* style. The inscription of Sulṭān Ḥusain Shāh from *Margram* (Murshidabad District) is particularly striking in this respect and shows the exquisite skill reached by the *ṭughra* style scribes at the end of the fifteenth century A.D.

The inscriptions of Mughal emperors show a refined taste in their literary style, for some of these monarchs, like Akbar, employed special poets at their courts for composing chronograms. The name of Muḥammad Mā'ṣūm of Bhakkar is well-known in this connexion and in the number for 1933-34 two inscriptions of this poet, found at Kaliadeh in the Gwalior State, have been studied by

Mr Ramsing SAKSENA, a scholar of that State. Nāmī's verse is always marked by deep pathos and the inscriptions of Kaliadeh illustrate his style well. As an example I give here the following quatrain:

ناصي ز فلک دوش دلم کرد سوال
کز رفته وز آینده بیان کن احوال
گفتا چه جز ز رفتگان نیست اثر
آینده چو رفته دان چه میپرسي احوال

" O Nāmī, yesterday my heart asked Heavens to describe the Past and the Future.

He (the Heavens) said, What information of the departed who left no trace?, and thou shouldst consider the Future also like the Past; so why seekest information about the former ?"[1]

In addition to the inscriptions studied in the two numbers of the *Epigraphia Indo-Moslemica* some *twenty other new records have been found at the Forts of Taltam* (Aurangabad District), *Kaulās* (Nanded District) *and Wākan Kheṛa* (Gulbargah District). As these inscriptions throw considerable light on the history of these forts they will be studied in the next number (for 1935-36) of the *Epigraphia Indo-Moslemica.*

During the period under report, Dr M. NAZIM, Superintendent, Archæological Survey, Western Circle, Poona, was on special duty in order to compile a monograph on the inscriptions of Bijapur which, although noticed by previous scholars, have not been studied systematically as yet. It is hoped that Dr NAZIM's monograph will be published shortly.

[1] The following is probably a more literal translation, keeping also the metre and the rhyme of the original:
Nāmī! Last night my heart questioned the Sky:
'Tell me about the Coming and those Passed Away!'
Quoth He: 'Of those who Passed, there is no trace'
'The Coming is like the Past. Why ask the Way?'

Editor.

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